UNIVERSITY OF NOVA GORICA

Annual Report of the University of Nova Gorica 2016

UNIVERZA V NOVI GORICI

Annual Report of the University of Nova Gorica 2016

Fakulteta za znanosti o okolju v Novi Gorici

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Introduction

In 2016, the activities of the University of Nova Gorica incorporated undergraduate and graduate coursework, as well as research, artistic work and development-related work. Pedagogical work was done at seven Schools. Research activity took place within six laboratories and six research centers. The University of Nova Gorica also has its University Library, its Publisher, Student Office, International Office, Career Center, Alumni Club, and its Project Office.

The University of Nova Gorica is also the founder of the University of Nova Gorica Foundation, which is the only university foundation in Slovenia. The foundation's purpose is to finance the university's educational and research activities. In 2016, the University of Nova Gorica and the Erste Card Ltd., the holder of the Diners Club credit card franchise, signed a partnership agreement. Together, they will issue and market their partnership cards with deferred payment called Diners Club-the University of Nova Gorica Foundation cards.

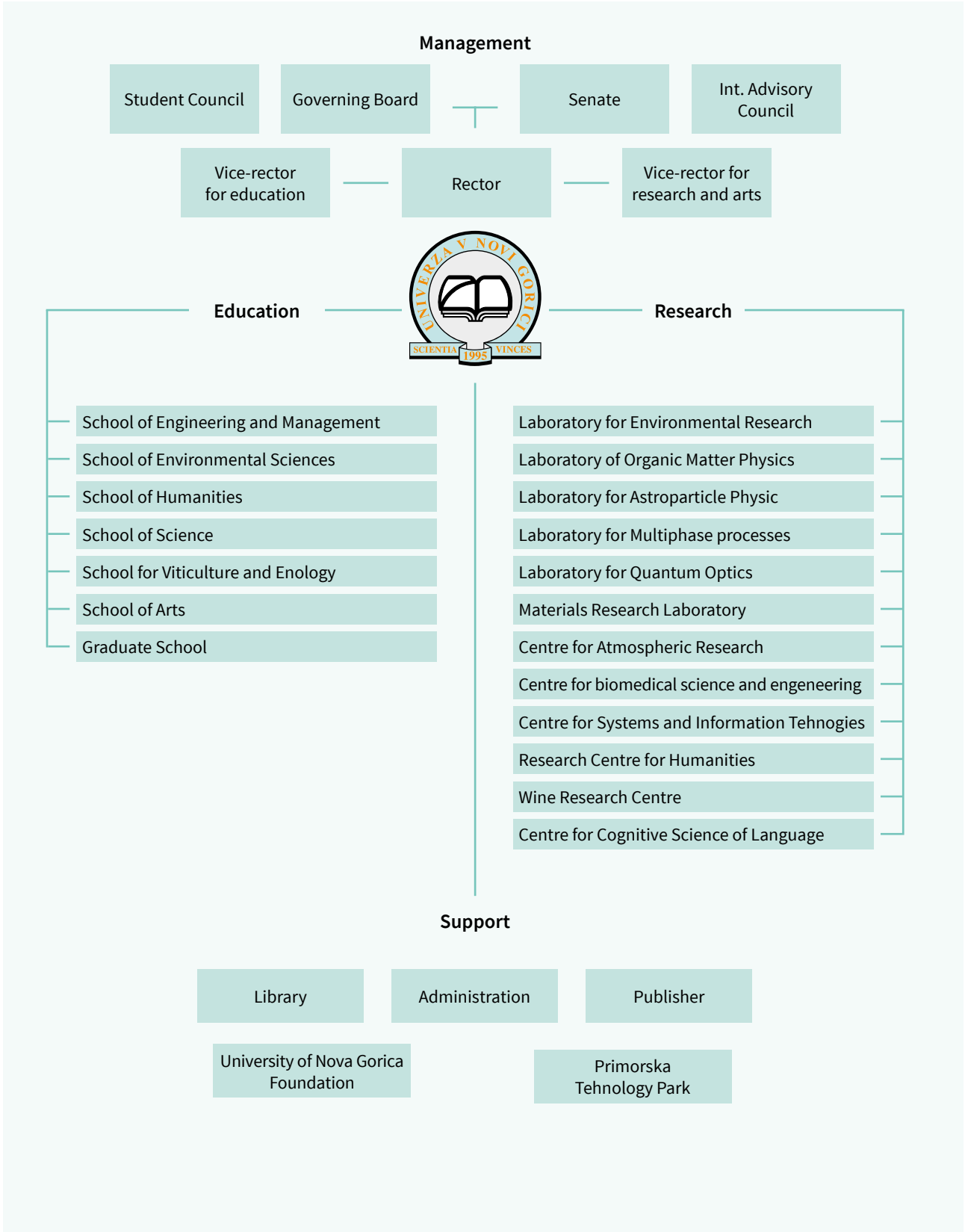
In 2016, the University of Nova Gorica, for the second time in a row, achieved great results on the chart of the world ranking of universities called U-Multirank. The University of Nova Gorica particularly stood out in its excellence when it came to research, international orientation, and regional engagement. It also shows good results in the areas of teaching and learning. If UNG's »U-Multiranking 2016« results are compared with those of other universities in the larger region, namely, also outside Slovenia's borders, it is noticeable that the University of Nova Gorica is - based on the majority of the evaluation criteria markers - the best university. In addition, we can also mention the results found on the newest international ranking chart, called RUR (Round University Ranking), where the University of Nova Gorica is placed extremely high, on 203rd place, which means that it ranks as the best university in Slovenia.

We would particularly like to emphasize the work of our faculty members who, in 2016, received recognition awards for their work. Prof. Dr. Božidar Šarler received the Zois Award for his state-of-the-art achievements in the development and the use of advanced numerical methods, Prof. Dr. Franc Marušič received the Zois Recognition Award for important achievements in the field of linguistics, and Prof. Dr. Gregor Cevc became the Ambassador of Science of the Republic of Slovenia. We also want to highlight our other colleagues and students who, in their daily work, get to experience scientific and educational successes.

In 2016, the University of Nova Gorica also got a new honorary member and a new professor emeritus. Prof. Dr. William E. Eichinger became an honorary member of the University of Nova Gorica due to his exceptional contribution to the development of the university's scientific excellence in the field of atmospheric research, and Prof. Dr. Stanko Strmčnik became professor emeritus at the University of Nova Gorica because of his important contribution to the development of scientific activity and his valuable work as a professor and advisor. Additionally, we gave the University of Nova Gorica Golden Plate recognition award to Prof. Dr. Matjaž Klemenc for his significant contribution to the development of the scientific-pedagogical infrastructure of the University of Nova Gorica.

The year 2016 ended with the signing of the agreement on the usage of the Lanthieri Mansion premises; it was signed by the Rector of the University of Nova Gorica, Prof. Dr. Danilo Zavrtanik, and the Mayor of Vipava, Ivan Princes, MSc. By signing of the agreement, the University of Nova Gorica became the manager of the entire Lanthieri Mansion, and by that, it gained, for the next 85 years, additional space in the size of 4000 m^2.

Organisational Structure



Staff Structure

As of December 2016, the University of Nova Gorica had a total of 146 regular staff members (of which 29 were shared employees with primary employment at another institution). This included 85 doctors of science, 19 research assistants, another 14 holders of bachelor's or master's degree, 22 administrative personnel, 3 librarians, 1 maintenance officer and 2 photocopy clerks; 35 staff members were foreign nationals. In addition, collaborating with the university were also over 200 adjunct faculty from other Slovenian universities and from universities outside of Slovenia.

	Regularly employed	Supplementary employed
2006	66	16
2007	89	22
2008	93	51
2009	113	57
2010	114	67
2011	124	49
2012	137	42
2013	130	42
2014	147	37
2015	121	33
2016	117	29

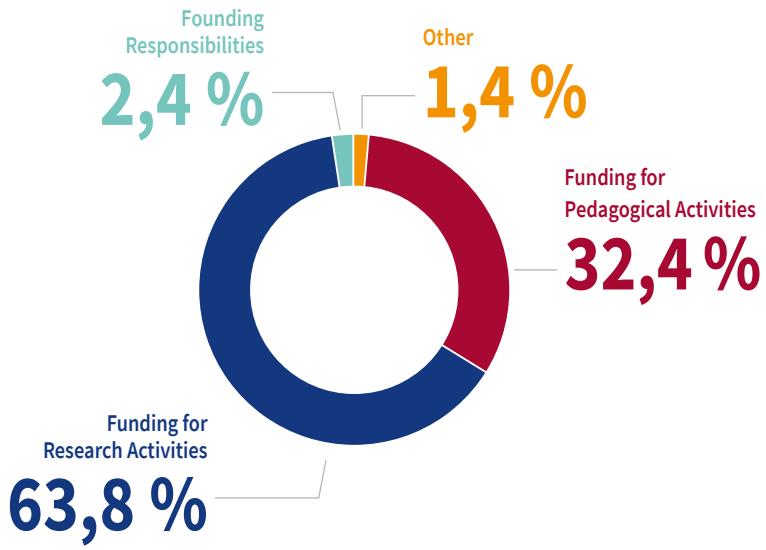
State	Nr. collaborators
Armenia	1
Bulgaria	2
France	1
Croatia	2
India	2
Italy	13
Kazakhstan	1
China	4
Macedonia	1
Germany	1
Pakistan	2
Poland	1
Romania	1
Russia	1
Ukraine	2
Total	35

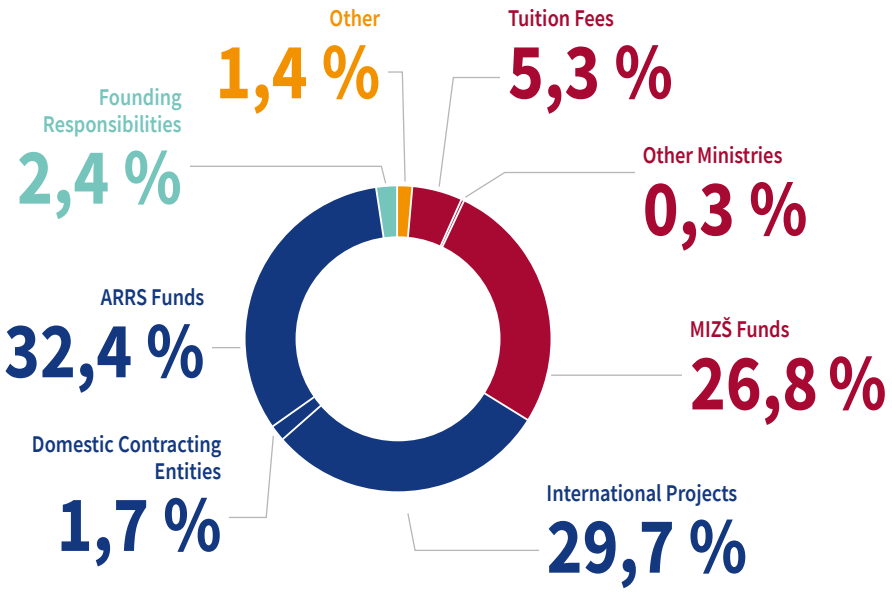
Financial Report

The University of Nova Gorica receives its funding from tuition fees, educational and research projects that are financed by the Slovene Ministry of Education, Science and Sport (MIZŠ) and the ARRS (Slovenian Research Agency), the income of the founders, international and industrial projects, as well as from various donations.

In 2016, the University of Nova Gorica obtained about EUR 7.033 million of assets (cash flow) from the below listed sources:

Founding Responsibilities 2,4 %
Funding for Research Activities 63,8 %
ARRS Funds 32,4 %
Domestic Contracting Entities 1,7 %
International Projects 29,7 %
Funding for Pedagogical Activities 32,4 %
MIZŠ Funds 26,8 %
Other Ministries 0,3 %
Tuition Fees 5,3 %
Other 1,4 %
TOTAL 100,0 %





Prizes and Awards

Employee awards

ZRC SAZU "researcher emeritus" award, April 2016
Prof. Dr. Stane Granda

ZRC SAZU "golden sign" award, April 2016
Prof. Dr. Tanja Pipan

The American Grand Prix award for the best film, September 2016
Prof. Rajko Grlić

Vesna award for the best coproduction, Festival of Slovenian Film, September 2016
Prof. Rajko Grlić

Ambassador of Science of the Republic of Slovenia, November 2016, State Award
Prof. Dr. Gregor Cevc

Zois Prize for 2016, State Award for Science, November 2016
Prof. Dr. Franc Marušič

Zois Award for 2016, State Award for Science, November 2016
Prof. Dr. Božidar Šarler

Student awards in 2016

Award for Best Music Documentary, Grossmann Festival 2016, July 2016
Dunja Danial

The Special Note for student film, Festival of Slovenian Film, September 2016
Ester Ivakič

First Prize in the Student Films sections, Festival of European Film Cinedays in Skopje, November 2016
Sandra Jovanovska

Honorary Degrees in 2016

Honorary Member of the University of Nova Gorica
Prof. Dr. William E. Eichinger

Professor Emeritus
Prof. Dr. Stanko Strmičnik

Golden plate of the University of Nova Gorica
Prof. Dr. Matjaž Klemenc

Student Award alumnus primus
Sandra Dukić
Mariam Perekhelashvili
Lara Brankovič
Gregor Mrak
Hovhannes Demirtshyan
Ester Ivakič

Student Award Alumnus Optimus
Tine Bizjak
Johannes Vuga Gregorič
Vesna Plesničar
Hovhannes Demirtshyan
Nika Lemut
Valerija Zabret

Important Events

FEBRUARY

Graduation Ceremony for Bachelor's, Master's, and Doctoral Students

On 18 February, the graduation ceremony for Bachelor's, Master's, and Doctoral students of the University of Nova Gorica was held at the Lanthieri Mansion in Vipava.

The School of Environmental Sciences produced three Bachelor degrees and one Bachelor degree produced the School of Engineering and Management, the School of Humanities and the School for Viticulture and Enology. Five Master's students also received their official titles. In addition to that, The University's Rector, Prof. Dr. Danilo Zavrtanik conferred doctoral degrees to twelve graduate students, coming from the Molecular Genetics and Biotechnology (Third Level), Cognitive Science of Language (Third Level), Physics (Third Level), Economics and Techniques for the Conservation of the Architectural and Environmental Heritage (Third Level), Comparative Studies of Ideas and Cultures (Third Level), Intercultural Studies – Comparative Studies of Ideas and Cultures, Environmental Sciences and Environmental Sciences (Third Level).

FEBRUARY

A Visit of the Delegation from the Yuri A. Gagarin Research & Test Cosmonaut Training Center

On 20 February 20, the Rector of the University of Nova Gorica prof. dr. Danilo Zavrtanik and the Vice-rector for Research and Arts prof. dr. Gvido Bratina welcomed the delegation from the Gagarin Research & Test Cosmonaut Training Center from the Start City, near Moscow at the University of Nova Gorica's venue at the Lanthieri Mansion.

The delegation consisted of Igor Rudyaev, Head of the Department for Foreign Economic Affairs, Veleriy Sivolap, Deputy Leader at the Department for Science, Oleg Zakharov, Head of the Educational Program, Elena Esina, Curator of their museum and Elena Danshina, Producer.

In the beginning, the guests were familiarized with the activities of the University of Nova Gorica and the members of the delegation from the Gagarin Research & Test Cosmonaut Training Center talked about their center which offers training that enables space travel. This was followed by a discussion about the possibility of cooperation in the areas of pedagogical work and research activity. The meeting ended with a guided visit through the Lanthieri Mansion and the tasting of the wines made by the University's School for Viticulture and Enology.

APRIL

The Visit of the President of the Brandenburg University of Technology

On 7 April, the University of Nova Gorica hosted the President of the Brandenburg University of Technology Cottbus-Senftenberg, Prof. Dr. Jörg Steinbach. He was accompanied by the German Ambassador in Slovenia, her Excellency Dr. Anna Elisabeth Prinz.

The guests were greeted at the Lanthieri Mansion (the University of Nova Gorica's venue) by the Rector of the University, Prof. Dr. Danilo Zavrtanik and the two Vice-rectors. The introductory speeches and discussions were followed by showing the guests the educational and research activities that are being carried out at the Lanthieri Mansion and at the University Center in Ajdovščina.
The main purpose of that visit was the exchange of various proposals for collaboration in the field of education and research.

MAY

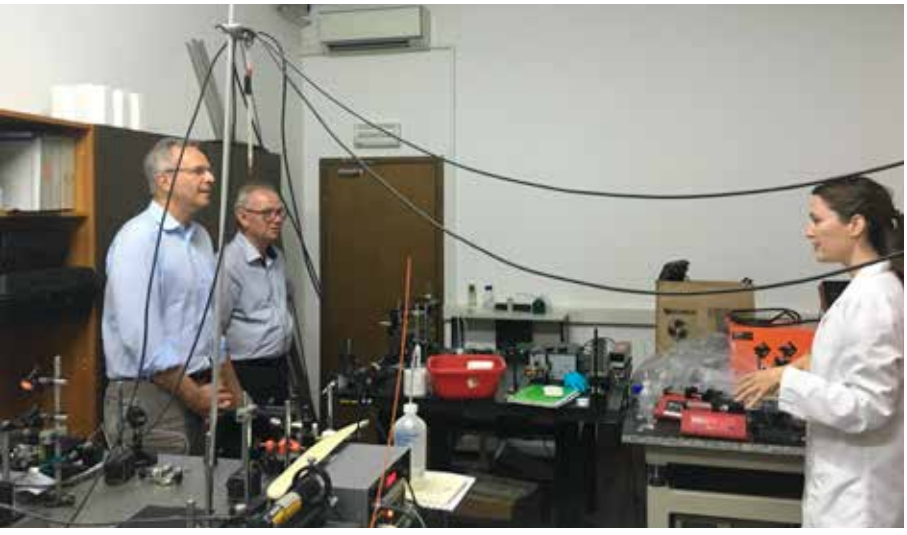
A Visit of the Japanese Ambassador at the University of Nova Gorica

On 18 May, courtesy call at the University of Nova Gorica was centred around the visit of Japanese Ambassador, his Excellency Keijita Fekudo and Mr. Yoshiaki Makino, the Head of the Department for economy and political matters.

At the University of Nova Gorica's venue at the Lanthieri Mansion, the guests were greeted by the Rector, Prof. Dr. Danilo Zavrtanik, Vice-rectors Prof. Dr. Gvido Bratina and Prof. Dr. Mladen Franko, as well as the Dean of the School for Viticulture and Enology, Doc. Dr. Branka Mozetič Vodopivec.

After the initial introduction, the Ambassador was presented with three existing agreements the University of Nova Gorica has signed with Japanese institutions, namely, The Center for High Energy Physics (KEK), Saitama University and Josai University. They also talked about the possibility to strengthen the connections in the field of pedagogical work, student exchange, joint study programs as well as in the research field.

At the end of the visit, the Ambassador visited the Wine Research Center and the School for Viticulture and Enology. He was shown the university's wines which are being produced on our viticultural and wine-growing estate.



AUGUST

The Visit of the Predsident of the Luxembourg University at the University of Nova Gorica

On 26 August, Prof. Dr. Rainer Klump, the President of the Luxembourg University visited the University of Nova Gorica.

He was greeted by the Rector of the University of Nova Gorica, Prof. Dr. Danilo Zavrtanik, who has been a member of the Luxembourg University's Governing Board since 2009.

Prof. Dr. Klump got to know the University's pedagogical and research activities and visited the University's venues in Ajdovščina and at the Lanthieri Mansion in Vipava.

Both the Rector, Prof. Dr. Zavrtanik as well as Prof. Dr. Klump were united in their opinion that they should strengthen the cooperation between the two universities.

SEPTEMBER

The University of Nova Gorica got its own Arts Academy

The School of Arts at the University of Nova Gorica became the Arts Academy, which means that Slovenia got its first university-level Arts Academy after 1945. The Arts Academy was founded as the School of Arts at the University of Nova Gorica in 2008 and it was formed on the basis of the 15 years of experience brought in by the Famul Stuart School of Applied Arts.

So this is not a newly created school but a school with a 22-year development line supporting it. The main activity of the academy is researching art and its various forms in the contemporary society, investigating the relation between art and other segments of our society, and creating conditions for the meetings of fine arts, film, and intermedia arts and practices, creative industries, and everyday practices that are a part of our life and society we live in. A special characteristic of the Arts Academy at the University of Nova Gorica is an active research of the potentials that are offered by this distinctly interdisciplinary environment created at the University of Nova Gorica.

The Academy is based at the Alvarez palace in the center of Gorizia; it moved there in 2012 as it was invited by Gorizia regional governmental administration. A close relation between Nova Gorica on the Slovene side and Gorizia as its neighbor/ twin city enables the students various ways of cooperating within the region, as well as within broader, international exchange programs.

The Academy has a bachelor's program called Digital Arts and Practices and there is also its master's lever parallel – the master's program Media Arts and Practices. The master's program was supported by the European Commission through the international project called ADRIART. Based on the vertical principle, the students move through different research environments and core modules of animation, film, photography, new media, contemporary arts practices, and space settings. As the University of Nova Gorica as a whole, also the Academy put a lot of focus on the international connections of students and faculty members. During regular stydent exchanges or shorter projects, the students can visit the partner universities in Gorizia, Lisbon, Oslo, Reka, Budapest, Graz, Manchester, Vilnius, and Turku. The Academy has also hosted both students and their mentors in Gorizia, where they, together with Slovene students, created several projects and films related to local topics. The projects have been shown to the general public as well.

Gala Opening at the Start of the New Academic Year.

OCTOBER

A Gala Opening at the Start of the New Academic Year

The main event at the opening of the 22nd academic year took place on Thursday, 13 October at the Lanthieri Mansion in Vipava.

Prof. dr. Danilo Zavrtanik, the Rector of the University of Nova Gorica, addressed the invited and reminded them of the events "ten years ago when the National Council of the Republic of Slovenia for Higher Education approved the application of the Nova Gorica Polytechnic and changed its status into a university, thus enabling the establishing of the fourth Slovene university – the University of Nova Gorica."

The University of Nova Gorica developed into an excellent university which is globally known mostly for its scientific value and international connections. Today, pedagogical work at the University of Nova Gorica is done at six schools faculties, and, since September 2016, also at the University's Arts Academy, which was formed on the basis of the former School of Arts. This is the first university-level arts academy since 1945. "The University of Nova Gorica is thus richer and stronger in the field of arts and this is, apart from science and pedagogical work, one of the core elements of every university," said Prof. Dr. Danilo Zavrtanik in his speech.

A versatile research activity is being carried out in six laboratories and six centers that are equipped with the latest research equipment. We are partners in smaller and larger international projects and cooperate with the most esteemed research institutions. The University of Nova Gorica is consistently turning into a multinational and multicultural academic environment. 25 percent of the staff members and 57 percent of doctoral students come from abroad. So far, the University of Nova Gorica has produced 189 doctorates, 295 master's degree diplomas and 790 graduates.

This year, we are particularly proud of the results of the international RUR chart (Round University Ranking), which placed our university among the best universities in the world. The University of Nova Gorica was ranked 203rd, which places it among the world's best higher education institutions. The top most places are mostly taken by American and English universities. As for its pedagogical work, the University of Nova Gorica was ranked even higher, on 87th place, which can be ascribed to the excellent professor-student ratio. This is particularly important for the Slovene higher education system, as it is normally still marked by mass study programs in terms of the number of students. This is due to the fact that the newest regulation issued by the Ministry of Education, Science and Sport finances study programs on the basis on the number of enrolled students.

"Despite everything, we are entering the new academic year with optimism, steadfast in our mission, dedicated to achieve international university standards and a responsible connection with our students and the society as a whole," said the chancellor of the University of Nova Gorica at the end of his speech.

At the gala ceremony, the Rector of the University of Nova Gorica, prof. dr. Danilo Zavrtanik also announced who received the ***title of the professor emeritus of the University of Nova Gorica***, the ***title of an honorary member of the University of Nova Gorica***, he gave out ***student awards alumnus primus*** and ***alumnus optimus of the University of Nova Gorica*** and the ***title golden donator of the University of Nova Gorica Foundation***. The President of the Management Board of the University of Nova Gorica, Mr. Boris Peric, gave out the ***golden plate of the University of Nova Gorica award***.

In its session of 7 September 2016, the Governing Board of the University of Nova Gorica agreed to award ***Prof. Dr. Matjaž Klemenc*** *a* ***golden plate of the University of Nova Gorica*** *for his exceptional contribution to the development of the scientific and educational infrastructure of the University of Nova Gorica.*

Awardees and administration of the University of Nova Gorica.

In its session of 6 July 2016, the Senate of the University of Nova Gorica agreed to award ***Prof. Dr. William E. Eichinger*** *the title of an* ***honorary member of the University of Nova Gorica*** *for his outstanding contribution to our scientific excellence in the field of atmospheric research.*

In its session of 6 July 2016, the Senate of the University of Nova Gorica agreed to confer the ***title of professor emeritus of the University of Nova Gorica*** *upon* ***Prof. Dr. Stanko Strmčnik*** *for his significant contribution to the development of scientific activities and his remarkable performance as professor and mentor.*

The title ***Golden donor of the University of Nova Gorica Foundation*** *received* ***Prof. Oskar Kogoj****. In 2014, Prof. Oskar Kogoj donated the University of Nova Gorica's Foundation permanent ownership of 20 artistic photographs of Prof. Italo Zanniere from the year 1947. They were made for the book "Spacal and the Karst". This was a collaboration between the authors Zoran Kržišnik, Oskar Kogoj and Italo Zanniere.*

The ***alumnus primus award*** *is granted to a graduate of the first and second level study programme who progressed regularly during studies and was the first of his or her generation of enrolled students to graduate. The* ***alumnus optimus award*** *is granted to the graduate of the first and second level study programme whose average grade in each study year was the highest of all the graduates. The awards were given to the graduates of the* ***School of Engineering and Management****,* ***School of Environmental Sciences****,* ***School of Humanities****,* ***School of Science****, and* ***School of Arts****.*

Golden plate of the University of Nova Gorica, Prof. Dr. Matjaž Klemenc.

Honorary member of the University of Nova Gorica, Prof. Dr. William E. Eichinger.

Professor emeritus of the University of Nova Gorica, Prof. Dr. Stanko Strmčnik.

Golden donor of the University of Nova Gorica Foundation, Prof. Oskar Kogoj.

Rector, Vice-rectors and Deans of the University of Nova Gorica.

NOVEMBER

Graduation Ceremony for Bachelor's, Master's, and Doctoral Students

On 8 and 9 November the graduation ceremony for Bachelor's, Master's, and Doctoral students of the University of Nova Gorica was held at the Lanthieri Mansion in Vipava.

The School of Engineering and Management produced seven Bachelor degrees, the School of Humanities had six Bachelor degrees, the School of Environmental Sciences had seven Bachelor degrees and the School of Arts and the School of Science one Bachelor degree. Twenty seven Master's students also received their official titles. In addition to that, the University's Rector, Prof. Dr. Danilo Zavrtanik conferred doctoral degrees to seven graduate students, coming from the Molecular Genetics and Biotechnology graduate study programme (Third Level), Intercultural Studies – Comparative Studies of Ideas and Cultures, Karstology (Third Level) and Environmental Sciences (Third Level).

NOVEMBER

The Visit of the Dutch Ambassador at the University of Nova Gorica

On 9 November, the University of Nova Gorica – in collaboration with the city municipality – hosted the Ambassador of the Kingdom of the Netherlands to Slovenia, his Excellency, Mr. Bart Twaalfhoven.

At the University of Nova Gorica's premises in Rožna Dolina, the guest was greeted by the Rector, Prof. Dr. Danilo Zavrtanik and the Vice-rectors Prof. Dr. Gvido Bratina and Prof. Dr. Mladen Franko.

The visit was mostly geared towards getting to know one another and presenting the work of the University of Nova Gorica, as well as its collaboration with Dutch institutions.

8 November 2016

9 November 2016

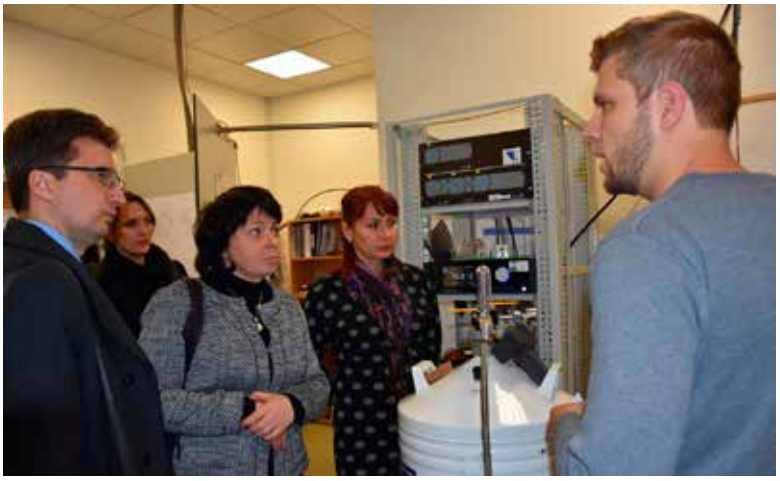
NOVEMBER

The Hungarian Ambassador Visited the University of Nova Gorica

On 14 November, the University of Nova Gorica hosted the Hungarian ambassador to Slovenia, Her Excellency, Ms. Edit Szilágyiné Bátorfi; she was accompanied by Consul, Mr. Gergely Schuchtár and attaché, Ms. Bernadett Thomas.

As part of the courtesy visit, the Ambassador met with the Rector Prof. Dr. Danilo Zavrtanik and Vice-rectors Prof. Dr. Gvido Bratina and Prof. Dr. Mladen Franko.

After the introductory visit at the University, there was a short discussion on the already existing cooperation between the University of Nova Gorica and various Hungarian institutions, as well as on the possibility of deepening the collaboration in the area of pedagogical work and research activities.



DECEMBER

Graduation Ceremony for Bachelor's, Master's, and Doctoral Students

On 6 December, the graduation ceremony for Bachelor's, Master's, and Doctoral students of the University of Nova Gorica was held at the Lanthieri Mansion in Vipava.

At the School of Environmental Sciences, six students received their bachelor degrees this year, seven students graduated from the School of Humanities and the School of Engineering and Management, and one student graduated from the School of Science and one from the School of Arts. There were also four master's students who finished their studies. Moreover, the chancellor of the University of Nova Gorica, prof. dr. Danilo Zavrtanik, promoted six new doctors of science who graduated from the Graduate School at the following study programs: Economics and Techniques for the Conservation of the Architectural and Environmental Heritage (Third Level), Humanities (Third level), Environmental Sciences (Third Level), and Karstology (Third Level).

DECEMBER

A Visit of the North-Caucasus Federal University from Stavropol

On 14 December, the University of Nova Gorica hosted a delegation of the North-Caucasus Federal University from Stavropol.

The visit of the North-Caucasus Federal University from Stavropol, which is one of the ten federal universities in Russia and represents a strategic institution for the development of science, healthy multi-ethnical relations and economy in the South or rather North Caucasus federal area, was organized by the Russian Center of Science and Culture in Ljubljana.

The delegation led by the first Vice-chancellor of the university, Prof. Dr. Dmitrij Aleksandrovič Sumskoj, was welcomed at the University of Nova Gorica – in the Lanthieri Mansion – by the Rector of the University of Nova Gorica, Prof. Dr. Danilo Zavrtanik and Prof. Dr. Mladen Franko, a Vice-rector for Education at the University of Nova Gorica.

After the initial introduction of both universities, the discussions touched the possibilities of cooperation in the field of environment, atmospheric research, humanities and arts. The delegation also visited the laboratories and the centers at the University center in Ajdovščina. The visit ended with the tasting of the university wines made by the School for Viticulture and Enology at the University of Nova Gorica.

DECEMBER

The Takeover of the Management of the Lanthieri Mansion

On Friday, 16 December, the Rector of the University of Nova Gorica, Prof. Dr. Danilo Zavrtanik and the Mayor of the Vipava municipality Ivan Princes, MSc. Signed an agreement of the usage of the Lanthieri Mansion premises. By signing the agreement, the University of Nova Gorica took over the management of the entire Lanthieri Mansion.

The University of Nova Gorica acquired an additional 4000 square meters of space for the next 85 years. The value of the investment into the second and the third part of the castle is EUR 3.8 million. 77 percent were covered by the State – together with the European funds – and one fifth was contributed by the Vipava municipality. The University of Nova Gorica will use the space for lecture rooms and research labs for the School of Environmental Sciences and the Laboratory for Environmental Research, as well as for the visiting staff housing. The Vipava municipality – in collaboration with the Nova Gorica museum – will open a museum of viticulture and enology.

Since 2013, the University of Nova Gorica has been renting the residence part of the Lanthieri Mansion, which now offers space for the School for Viticulture and Enology, the Wine Research Center, and the Center for Biomedical Sciences and Engineering. Apart from that, the Lanthieri Mansion also hosts festive and protocol events of the University of Nova Gorica.

Organizing of Symposia, Workshops and Schools

EUSPEC winter school on core-level spectroscopies: fundamentals and applications of ab-initio methods in spectroscopy

EUSPEC winter school on core level spectroscopies took place in Ajdovščina campus between 1st and 11th February 2016. It was coorganized by doc. dr. Layla Martin-Samos and doc. dr. Barbara Ressel from University of Nova Gorica and prof. Anton Kokalj from Jožef Stefan insitute in Ljubljana. It was first ever bi-weekly school organized under the EUSPEC COST action innitiative. 46 participants from all over the globe spend the mornings listening to lectures provided by some of the highest ranking experts in their fields while the afternoons were reserved for practical demonstration of different computer codes and approaches for modelling spectroscopic properties. Among others list of planary speakers included Maria Piancastelli, Lucia Reining, Frank de Groot, Stefano Baroni with demonstrations of Wien2k, Quantum Espresso and Orca software packages.

Participants of the 6th doctoral school IDPASC in Lanthieri, Vipava

International doctoral school IDPASC in Vipava

In the scope of the International Doctorate Network in Particle Physics, Astrophysics and Cosmology (IDPASC), Laboratory for Astroparticle physics hosted the 6th edition of the general IDPASC school at the newly renovated Lanthieri Mansion in Vipava between May 21 - June 1, 2016. The school was made possible with kind support of the Italian Cultural Institute, Instrumentation Technologies company from Solkan and the Municipality of Ajdovščina.

The school brought together around thirty talented PhD students from Austria, Croatia, Germany, Italy, Portugal, Serbia, Slovenia and Spain. The school program was built on four main courses: Elementary Particle Physics, Cosmology, Astroparticle Physics and Neutrino Physics, which were covered by world-recognized lecturers coming from France, Germany, Italy and Slovenia.

Workshop Living with Two Languages from Childhood until the Third Age

In June 2016, the U. of Nova Gorica's Večjezičnost velja/Bilingualism Matters center coorganized, together with the Slovene Research Institute (Slori) and the Province of Gorizia, a workshop on bilingualism. The aim was to present benefits of bilingualism to the general public. The first part of the workshop saw M. Vernice (University of Milan – Bicocca) and V. Kavčič (Wayne State University, Detroit) discuss neurocognitive aspects of bilingualism, the second part showcased several studies of Slovenian-Italian bilingualism (S. Pertot, K. Vodopivec and J. Pečar (project JezikLingua)), S. Andreetta (U. of Nova Gorica, Večjezičnost velja), M. Grgič (Slori)). The conference attracted 60 attendees.

First astronomical symposium in Slovenia

At the 100th anniversary of theoretical prediction of black holes Laboratory for Astroparticle Physics organized the first International Astronomical Union Symposium to be held in Slovenia (www.blackholes2016.si). The symposium *New Frontiers in Black Hole Astrophysics*, took place from 12th to 16th Sep 2016 in Cankar Centre and was the largest professional astronomy event in Slovenia so far. It was accompanied by several events for general public: exhibition about black holes in the National Assembly of the RS and in Cankar Centre, teachers workshop, and a public lecture, in which Prof. Dr. Sheila Rowan, LIGO collaboration member, presented a captivating story about detection of gravitational waves. The lecture took place on Sep 14th, exactly on the 1st anniversary of the first direct detection of gravitational waves.

Summer school "Basic Photothermal and Photoacoustic Techniques: Theory, Instrumentation and Application"

We have organized the Summer school: Basic Photothermal and Photoacoustic Techniques: Theory, Instrumentation and Application, which took place in the Ettore Majorana Centre for Scientific Culture in Erice, Sicily, from 19 to 26 October 2016. The Summer school was part of the 4th Mediterranean International Workshop on Photoacoustic & Photothermal Phenomena and was attended by 43 participants from Europe, Asia, South and North America, and Africa.

During the summer school we also presented two lectures:

- D. Korte: Basic Photothermal and Photoacoustic Techniques: Theory, Instrumentation and Application,
- M. Franko: Thermal Lens Spectrometry and Applications in Biomedical Research and Diagnostics,

which were selected by ARRS in the framework of the program for promotion of Slovene science abroad.

Participants to the Summer School "Basic Photothermal and Photoacoustic Techniques: Theory, Instrumentation and Applications", in Dirac's hall, Ettore Majorana Centre, Erice, Sicily, 19. - 26. October 2016.

Important Achievements

APRIL

The second consecutive year exceptional results of the University of Nova Gorica at the Global U- Multirank 2016 University Rankings

In particular, the results show excellence of UNG performance in the field of research, international orientation, and regional engagement. Good results were also ascribed to the areas of teaching and learning. If comparing U-Multirank results of UNG with the results of other universities in Slovenian and wider region outside Slovenian borders, it shows that the University of Nova Gorica is the best university according to a majority of ranking parameters. It not only ranks higher than other Slovenian universities, but also higher than bigger universities in our vicinity, such as the Graz University the University of Trieste, Padova University, and the University of Zagreb. According to research indicators and international orientation UNG ranks among best European and world universities. It is worth mentioning that scientific excellence of UNG was recognized and outlined also in the European Commission report on scientific performance of European universities "Scientific Output and Collaboration of European Universities", in the period 2007 – 2011, which stated: »Four institutions stand out for their strong performances in terms of scientific impact, as they are always among the top five according to the three citation-based impact measures: the University of Nova Gorica, the University of Oxford, École polytechnique fédérale de Lausanne (EPFL), University of Cambridge and ETH Zurich.«

»U-Multirank« is a comparative university chart that was developed within the EU with the financial help that came from the European Commission. It is intended for comparative grading of universities from all over the world. This year over 1300 universities from 90 countries were included into the grading project.

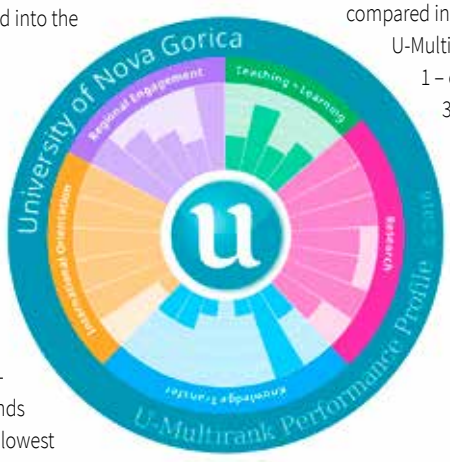


Foto_32 The graphic illustration of UNG's profile on the U-Multirank 2016 global ranking chart. The height of each column within a specific circular sector denotes a grade achieved for a specific criterion (the tallest column stands for 1 – exceptionally good, and the lowest column stands for 5 –weak).

U-Multirank is the first global chart that gives a multidimensional picture of the way universities operate, as it compares universities in five different areas: **teaching and learning, research, international orientation, regional engagement and knowledge transfer**. If compared to other ranking charts that are geared towards classifying universities in charts like "best 100 universities" (based on a communal grade that is composed of parameters with different levels of importance), U-Multirank gives a complete picture of each university's virtues and disadvantages. This approach and method give students the right sort and amount of information so they can pick the university that is appropriate for them more easily.

In order to create an efficient display that compares universities, the U-Multirank project offers to the students an online application that can be found on the following website www.umultirank.org. By using this application, anyone can directly pick various universities in the select region or wider (on a global scale) and compare them in the areas of their interest.

U-Multirank uses 31 different indicators by means of which universities are graded and compared in various areas and activity fields. U-Multirank uses a five-degree chart: 1 – exceptionally good; 2 – good; 3 – average; 4 – below average; 5 – weak. Detailed results that pertain to UNG (based on individual indicators) can be found on U-Multirank's website: "www.umultirank.org".

JUNE

University of Nova Gorica best university in Slovenia, in 203th place in world rankings

The latest international Round University Ranking system (RUR) considers the University of Nova Gorica best university in Slovenia and ranks it among the leading world universities.

According to the results of the international Round University Ranking system (RUR, "http://roundranking.com/universities.html"), performing evaluations and rankings of leading world universities, **the University of Nova Gorica in 2016 was ranked in the excellent 203th place** and thus joined the elite group of world's most renowned universities. Among the latter the most highly esteemed U.S. and British universities prevail, such as the California Institute of Technology, Stanford University, Harvard University, the University of Oxford, the University of Cambridge etc.

In the area of the quality of teaching, the University of Nova Gorica was ranked in an even higher, excellent 87th place, also due to the extremely favourable student-professor ratio.

The results of RUR show that in terms of all quality assurance indicators the University of Nova Gorica holds a remarkably strong lead over the rest of the universities in Slovenia. Moreover, it performed better than older and larger universities in Slovenia's cross-border area (e.g. the University of Graz in Austria, as well as Italy's University of Trieste and University of Padua).

RUR measures the performance of the leading world universities on an annual basis by universities' overall results achieved across four key missions: teaching, research, international diversity and financial sustainability. RUR rankings are based on the data on world universities collected by **Thomson Reuters**, as part of the **Global Institutional Profiles Project** ("http://ip-science.thomsonreuters.com/globalprofilesproject/").

Thomson Reuters' assessment of universities is based on data obtained from three main sources: data on the institution's publications and citations from *Thomson Reuters Web of Science®*; the results of the annual *Academic Reputation Survey* and the data provided by the institution directly to Thomson Reuters. A database is thus formed on the institution's scientific and teaching performance, its sources of financing and the characteristics of its students and staff.

On the basis of the data obtained RUR's analysis is performed, considering 20 indicators of quality performance in the previously mentioned four key mission areas. The major part of the assessment is represented by the indicators in the area of research (40 %) and teaching (40 %). All indicators take into account the **size of the institution**. Consequently, **small and large universities can equally be compared in terms of their performance**.

Despite its short tradition (celebrating its 20th anniversary in 2015) and a relatively small size, the University of Nova Gorica excels on an international scale. Its excellence has also been recognised in the **U-Multirank 2015 and 2016** comparative world univeristy rankings and can by no means be considered as a coincidence but rather represents the results of hard work and the clearly defined mission of the development of the University of Nova Gorica. The University's scientific excdellence was also identified and emphazied in the "European Commission's report on the Scientific Output and Collaboration of European Universities in the period from 2007 to 2011", stating that according to the criteria of scientific excellence and the scientific impact of its publications, The University of Nova Gorica is ranked among five best universities in Europe, including the University of Oxford, the University of Cambridge, the École Polytechnique Fédérale de Lausanne (EPFL) and the ETH Zürich.

JUNE

A Breakthrough in Organic Electronics: all-organic, flexible optical memory devices

On June 21st, the prestigious international journal Nature Nanotechnology published an article, in which an international group of scientists from the University of Nova Gorica, Strasbourg University (France), CNRS (France), and Humboldt University Berlin (Germany) describes the results of their experimental study focused on design and fabrication of all-organic optical memory device. They report that a carefully selected combination of semiconducting polymers and light-sensitive molecules enables the construction of an extremely efficient optical memory device. Read and write of the information is accomplished by light pusles and not electrical circuits as usual.

Such memory device can store 256 times more bits of information than the existing single-level memory devices. At the same time, these cells use all the advantagesof organic semiconducors, as they are relatively easy to make, they are flexibe and promise integration with textiles for wearable electronics, e-paper and other advanced electronic devices that are made from organic semiconducting materials.

The memory device is built as a polymer-based electric switch. Light-sensitive molecules are blended with the polymer in a thin layer. They change their shape under the influence of light, which causes a change in conductivity of the blend. The scientists have discovered that with a specific combination of such molecules and the polymer it is possible to write the information into the memory element with green light. We can delete it with ultraviolet light.

With the use of laser light they managed to store – in one single memory element – as much as 256 different states – bits. This number equals eight classic memory elements. The new memory device exhibits very good stability – 70 read-write cycles, and the data remained written on it for over 500 days. The mechanical durability of such devices produced on a plastic foil is exceptional as they can, endure more than a thousand folds.

The published article is a result of three years' work of the research team and represents a milestone in organic electronics that promises the development of totally new optoelectronic devices.

AUGUST

Time-dependence measurements of photoconductivity crucial for the new type of organic optical components

On 25th of July 2016, the prestigious international journal Nature Nanotechnology has published an article by an international group of scientists from the University of Strasbourg (France) and the University of Nova Gorica (Slovenia). The article presents the results of an experimental study of a novel two dimensional nanostructured photo-sensor. The photo-sensor comprises two-dimensionally aligned semiconducting polymer nanowires, which results to be highly efficient system for the detection of the visible light. This discovery opens the door to the development of fast light photo-sensors, which will be etirely made of organic materials.

For the purpose of the study, the scientists from the University of Nova Gorica exploited their experimental setup for the time-dependent measurements of the photoconductivity response of organic thin layers. This complex system, comprising a pulsed laser and fast electronic measurement instruments, was built in the "Laboratory of Organic Matter Physics" (LOMP), and is one of the few setups worldwide, which can be used to investigate monolayer-thick films. All experiments are performed in a controlled nitrogen atmosphere, which prevents the contamination of polymer nanostructures.

The article presents the results, which were obtained in LOMP using 3-ns light pulses of green light for the photoexcitation of electric current. The results demonstrate a fast response of two-dimensional polymer nanostructures. They discovered that the electric current of the photoexcited carriers reach its highest magnitude only 10 ns after the illumination. Such fast response promises bright future for the development of organic optical devices including organic photo-detectors, organic light-emitting diodes (OLEDs), and organic solar cells. The use of two-dimensional polymer nanostructures as proposed in the article promises fabrication of organic devices without transparent metal electrodes. Therefore, organic optical devices can be fabricated on flexible substrates.

DECEMBER

A list of ten most prominent articles

A list of ten most prominent articles published by the faculty members of the University of Nova Gorica in journals with the highest Impact factor.

Number.	Journal	Authors, University of Nova Gorica faculty members	The Impact Factor
1	NATURE NANOTECHNOLOGY	Egon Pavlica, Gvido Bratina	40,632
2	NATURE NANOTECHNOLOGY	Egon Pavlica, Gvido Bratina	40,632
3	NATURE PHOTONICS	Giovanni De Ninno	34,159
4	NATURE COMMUNICATIONS	Giovanni De Ninno	12,001
5	NATURE COMMUNICATIONS	Giovanni De Ninno	12,001
6	ADVANCED FUNCTIONAL MATERIALS	Matjaž Valant, Mattia Fanetti, Andraž Mavrič	11,774
7	ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES	Andreja Gomboc	11,121
8	ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES	Gabrijela Zaharijas	11,121
9	ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES	Gabrijela Zaharijas	11,121
10	ACS CATALYSIS	Iztok Arčon	9,874

Research Activity

In 2016, the research work at the University of Nova Gorica was organized at six research laboratories and six research centers. Those were: *Laboratory for Environmental Research*, *Laboratory for Astroparticle Physics*, *Laboratory of Organic Matter Physics*, *Laboratory for Multiphase Processes*, *Materials Research Laboratory*, *Laboratory of Quantum Optics*, *Centre for Atmospheric Research*, *Centre for Systems and Information Technologies*, *Wine Research Centre*, *Research Centre for Humanities*, *Centre for Biomedical sciences and Engineering*, and *Center for Cognitive Science of Language*.

Laboratory for Environmental Research

(Head: Prof. Dr. Mladen Franko)

Plastic pellets sampled on a beach of Adriatic Sea.

Laboratory for Environmental Research (LER) conducts research in several important areas of environmental sciences and technology, and provides the grounds for intensive interaction between ecologists, ecotoxicologists, analytical chemists, material scientists, environmental chemists and technologists. Research activities at LER include development of novel and unique ultrasensitive laser-based and other analytical methods and toxicological tests, which enable new insights into environmental processes at the level of molecules, cells, organisms and ecosystems.
LER also develops nanostructured photocatalytic materials for self cleaning surfaces and for water and air purification, as well as biocomposites with antimicrobial activity and high absorptive capacity for removal of pollutants and toxins from wastewaters.

Research activity

In the field of ultrasensitive laser-based analytical techniques we have developed novel methods, based on combination of TLM – microscopic thermal lens spectrometry (TLS), mikrofluidics and enzimatic bioanalytical techniques, for detection of toxin microcystin and pollutants such as Cr(VI). For samples of less than 1 μL the developed methods enable high speed of analysis (up to 20 samples/minute) and limits of detection lower than in case of spectrophotometric techniques, despite 100 times shorter optical interaction length.

We have also continued to develop HPLC-TLS techniques for determination of endogenous antioxidants (bilirubin, biliverdin). This contributed importantly to the discovery of bilirubin in vascular endothelial cells, determination of its concentration, and demonstration of possibility to increase the cellular antioxidant activity through activation of enzyme hem-oxygenase . In the area of stability, transport and toxicology of pollutants in the environment, we continued the research on the degradation of antibiotic ciprofloxacin in water. We used photocatalyisis and pulsed electric field technique to degrade ciprofloxacin and found that photocatalysis is more efficient. We also conducted a study on the frequently used herbicide glyphosate and observed that it decreases the number of offspring in earthworms of the species *Eisenia andrei*.

Deposition of self-cleaning thin film on hardly accessible glass surface of a building in Idrija.

We participated in an IPA Adriatic project DeFishGear, which aimed to obtain statistical data on plastic debris in Adriatic Sea, to make stakeholders aware of the challenging problems of plastic waste, reuse and recycling of abandoned fishing nets, and to obtain data about persistent organic pollutants absorbed on microplastics. For the needs of the project, we developed a methodology for extraction and detection of persistent chlorinated organic pollutants by GC, and analyzed over 1000 samples of plastic pellets sampled on several beaches of the Adriatic Sea.

For the development of novel biocomposite materials we tested antibacterial efficiency of biocomposites made of cellulose and keratin with addition of silver nanoparticles. We showed, that antimicrobial activity of biocomposite materials depends on the type of keratin (wool, feathers), and on the concentration of nanoparticles. The biocompatibility of the materials was proven by performing tests on human fibroblasts, which did not show any harmful effects.

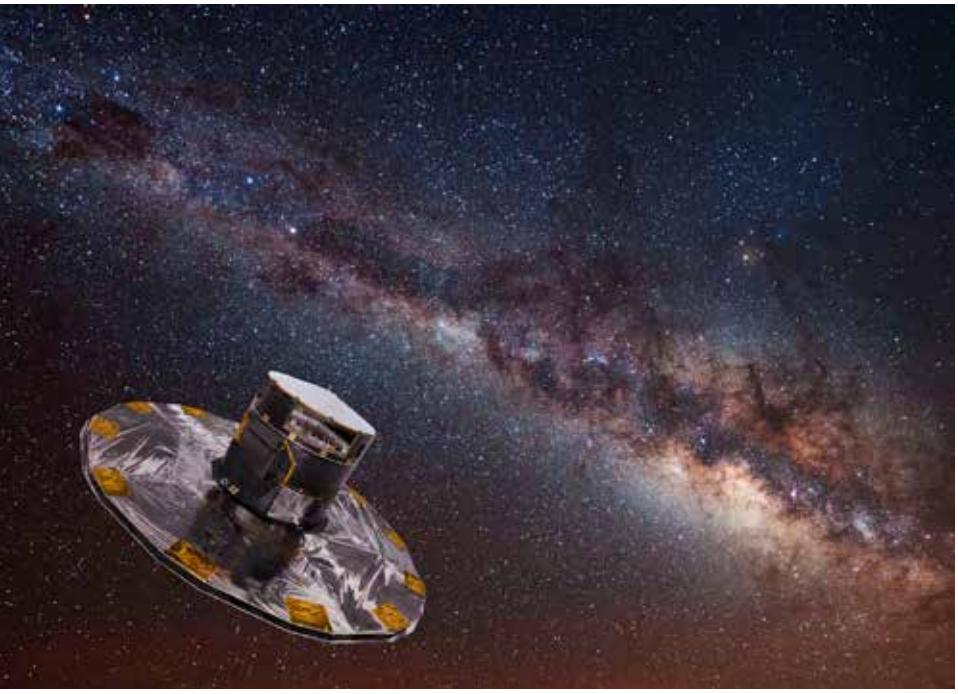
Laboratory work: testing of different materials for adsorptive ability

We also tested materials with different adsorptive ability to bind pollutants and bioremediation potential: limestone sand, expanded clay, Filtralite® (commercial granular material, which is increasingly used in green technologies), peat, bark and their combinations. Since most of the pollutants enter the environment through the water cycle, we started to monitor the seasonal dynamics of chemical pollutants in various water bodies (rivers, karstic percolating water).

Research of titania based photocatalytic thin films and powders continued by optimizing sol-gel synthesis of transparent TiO_2-ZrO_2-SiO_2 thin films with self-cleaning efficiency. We have tested our coating formulation on hardly accessible glass surfaces of a building in Idrija, where we can observe functionality of our materials in real environment. New modifications of TiO_2 photocatalyst were prepared by additions of different elements (Zr and Cu, Mn, C) and their influence on the structure and properties were studied, focusing on mineralization of organic pollutants in water under solar irradiation.
A photothermal beam deflection method was developed for determination of heat capacity of glass samples with deposited TiO_2 layer, which is an important parameter of thermocromic windows. The thermal diffusivity was determined from the dependence of signal's phase on the distance between the probe and pump beam axes. The thermal conductivity was determined by fitting the theoretical model, developed for this purpose, to experimental data for photodeflection signal's amplitude and phase at different modulation frequency (1 Hz – 3 kHz)of the excitation beam. From the values of thermal conductivity and diffusivity the heat capacity of the examined sample was calculated.

Laboratoy for Astroparticle Physics

(Head: Prof. Dr. Danilo Zavrtanik)



Connecting the studies of the phenomena on the extremely large and the extremely small scales via astrophysical observations of the Universe provides a more complete, unified picture of matter and its interactions. Combining the information carried by different cosmic messengers, such as charged cosmic rays, gamma-rays, neutrinos and gravitational waves is the key to better understanding of physical processes in the Universe. Our activities take place within international research collaborations Pierre Auger, Cherenkov Telescope Array, Fermi-LAT, Gaia, Liverpool telescope and Belle/Belle2, and are focused on the studies of cosmic rays, transient astrophysical phenomena, dark matter and possible mechanisms responsible for the matter – anti-matter asymmetry in the Universe.

Pierre Auger Collaboration

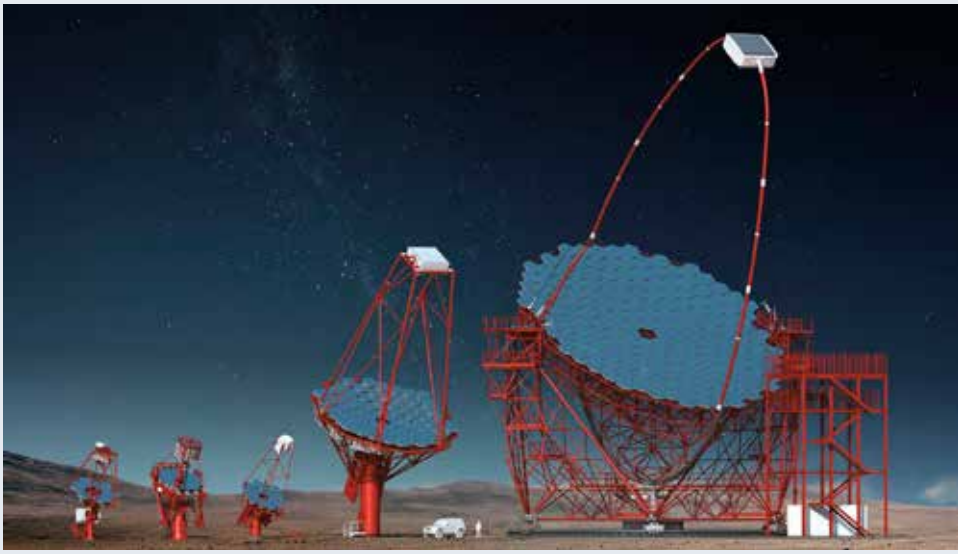
Our flagship project is research of ultra-high energy cosmic rays with the world's largest cosmic ray detector, the Pierre Auger Observatory. Upon collisions with nuclei in the Earth's atmosphere, they create huge showers of secondary particles, which can be used to identify the properties of their primary cosmic particle. The observatory combines data from a grid of 1660 water Cherenkov detectors spread on the surface with data from four fluorescence telescope sites, observing excited nitrogen molecules along the shower path. Auger results support the production of extremely energetic cosmic rays via particle acceleration at astrophysical sites and the suppression of their flux due to interactions with cosmic microwave background. In 2016, we focused on searches for the signatures of very high energy gamma-ray flares from galactic astrophysical sources in Auger low-energy data, and on searches for ultra-high energy neutrinos via possible correlations of Auger events with astrophysical sources or remarkable transients, such as gravitational wave events recently observed by the LIGO experiment.

Cherenkov Telescope Array Consortium

Studies of very high-energy cosmic gamma rays provide crucial information on non-thermal Universe. Contrary to charged cosmic particles, photons are not affected by magnetic fields, so they can point back to their production sites. Our research was coordinated within the Cherenkov Telescope Array (CTA) consortium, which will start constructing a new generation observatory for the detection of gamma rays between 20 GeV and 100 TeV in 2017. Its two sites, one in each hemisphere, will provide full-sky coverage and considerably improve the sensitivity with respect to current experiments. In 2016, our main research activities were performed in collaboration with international partners. We were involved in the development of silicon photomultipliers as light detectors for CTA cameras (U. of Padova), identification procedures for ultra-high energy cosmic ray sources amongst active galactic nuclei (U. of Innsbruck) and sensitivity studies for the search of dark matter in the Galactic center (INFN Trieste).

Fermi Large Area Telescope Collaboration

Fermi Large Area Telescope (LAT) is the main detector onboard the Fermi Gamma-ray Space Telescope, leading space laboratory for the high energy gamma-ray research since 2008. In the energy range between 20 MeV and 300 GeV, Fermi LAT so far discovered about 100 Galactic pulsars, more than 800 active galactic nuclei, and unexpectedly, a large bubble-like structure stemming from the center of the Milky Way above and below the Galactic plane. It also provided strong constraints on the nature of dark matter particles by investigating their decay or annihilation signatures in astrophysical objects.



Astrophysical transients

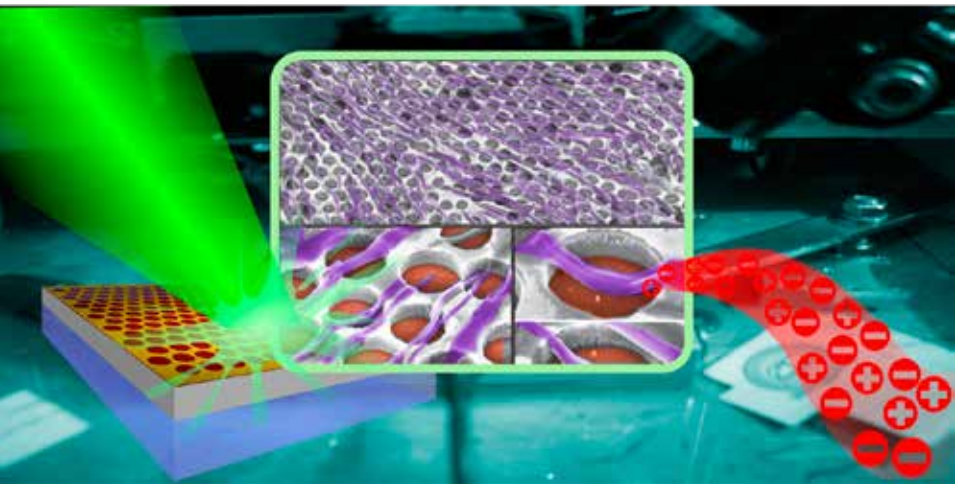
Our team is active in international collaborations studying astrophysical transient sources, which include gamma-ray bursts, the most violent explosions in the Universe since the Big Bang. We lead the international project for gamma ray burst optical afterglow observations with the robotic Liverpool Telescope on Canary Island La Palma. Using its SPRAT spectrograph, we contributed to the identification and classification of optical counterpart candidates of recent gravitational wave events, detected by the LIGO experiment. In 2016, we also collaborated with the European Space Agency's mission Gaia, which enabled us to observe an interesting gravitational micro-lensing event, and joined the Large Synoptic Survey Telescope project, which will provide the biggest and most ambitious sky-survey so far, observing 20 billion stars and detecting numerous transient events.

International collaboration Belle2

A complementary activity of the Laboratory is the involvement in the Belle and Belle2 Collaborations at the electron-positron collider SuperKEKB in the Japanese Center for Particle Physics. The Belle experiment demonstrated the existence of a deviation between the measured and the predicted values of *CP* violation in the decay of certain modes of *B* mesons, which could be due to possible new sources of *CP* violation, not covered by the Standard model. These as yet unknown types of processes are necessary for the satisfactory explanation of the evolution of the Universe and of its present properties. The continuation of detailed studies of these phenomena with Belle2 is foreseen in 2017.

Laboratory of Organic Matter Physics

(Head: Prof. Dr. Gvido Bratina)



Perylene-carboxiimde (PTCDI-C8) nanowires on top of hexagonal nanostructures, which acts as a very sensitive photodetector for visible light. Since nanoscale dimensions, the photocurrent response is in the range of few nanoseconds.

Laboratory for organic matter physics focuses on electronic, structural and electronic properties of organic semiconductors, and two-dimensional materials such as graphene. We study processes that govern transport of electric charge carriers in organic semiconductor thin layers and in thin layers of blends of organic semiconductors and low-dimensional materials such as graphene and molybdenum iodide nanowires. At the core of these studies are measurements of transit time of photogenerated charge carriers in electric field provided by coplanar electrodes. Initial stages of growth of organic semiconductors (polymers and small-molecule materials) are studied by atomic force microscopy. The laboratory has extensive collaboration with several research groups in Europe, Korea, Japan and United States of America.

A large portion of this year's activity in Laboratory of organic matter physics (LFOS) was devoted to different properties of poly(3-hexylthiophene) (P3HT), a prototypical polymer, which is becoming increasingly attractive in studies of novel electronic and optoelectronic devices. Our work encompasses studies from morphology, charge transport and devices.

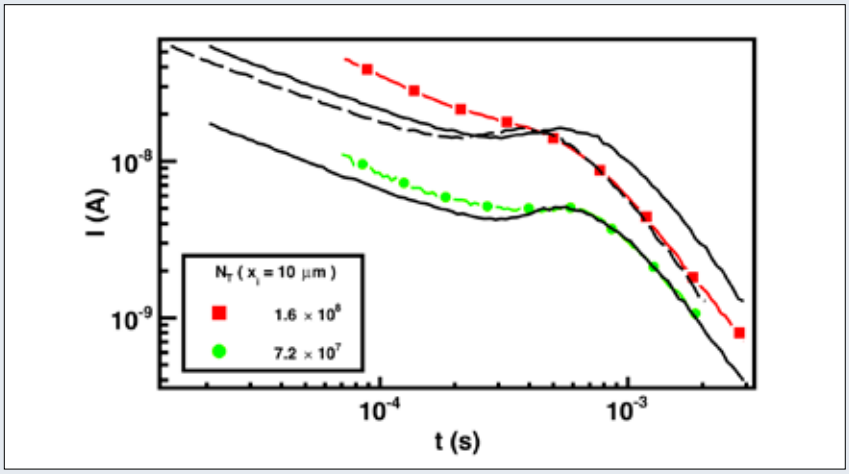
Morphological studies of organic semiconductor thin layers are important to understand the coupling between the shape and the function, i.e. the role of morphology of the layers in determining their charge transport properties. In this respect, we have performed a systematic study of organic thin film transistors based on P3HT fabricated under different deposition conditions of P3HT. We have devised a novel and efficient method to improve charge mobility of organic field effect transistors by means of nanowire formation. The treatment, termed solvation, consists of depositing a small quantity of a solvent directly on top of a previously deposited semiconducting film, and allowing the solvent to evaporate slowly. Such treatment results in an increase of the saturation mobility by more than one order of magnitude, reaching values as high as $3.4\ 10^2\ cm^2/Vs$, while devices preserve their high ON/OFF ratio of 10^4. The atomic force and scanning electron microscopy studies show that solvated P3HT layers develop a network of nanowires, which exhibit increased degree of structural order, as demonstrated by micro Raman spectroscopy.

Photoconductivity of organic semiconductors (OSs) is characterized by relatively high photon-to-charge conversion efficiency and low charge carrier mobility. We have performed a systematic study of dependence of time-resolved photocurrent on the point of charge excitation within the organic semiconductor channel formed by two coplanar metal electrodes. The results confirm that spatial variation of electric field between the electrodes crucially determines transport of photogenerated charge carriers through the organic layer. Our photocurrent measurements show that the transit time of

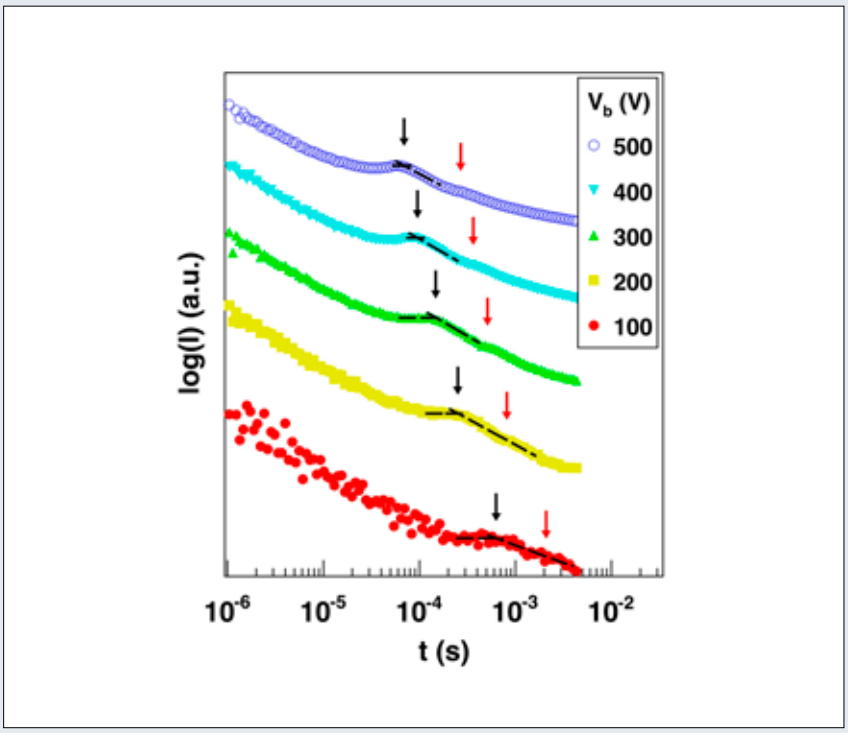
photogenerated charge carrier packets drifting between the two electrodes decreases with increasing travelling distance. By comparing the measured time-dependent photocurrent to Monte Carlo simulations of hopping transport in a disordered organic semiconductor layer, we have found that the space-charge screens the external electric field and captures slower charge carriers from the photogenerated charge carrier packet. The remaining faster carriers, exhibit velocity distribution with significantly higher mean value and shorter transit time.

Stepping up in complexity of using P3HT we have used blends of this polymer with photochromic diarylethene to achieve light sensitivity and subsequent optical memory applications, which may pave the way towards all-organic electronic devices, such as flexible logic circuits, displays and solar cells. The use of blended P3HT allowed us to fabricate a multilevel non-volatile flexible optical memory thin-film transistor. The memory elements can be switched with ultraviolet and green light irradiation. A three-terminal device featuring over 256 distinct current levels was fabricated, the memory states of which could be switched with 3 ns laser pulses. The memory element is also durable, and sustain over 70 write–erase cycles and non-volatility exceeding 500 days. The device was implemented on a flexible polyethylene terephthalate substrate, validating the concept for integration into wearable electronics and smart nanodevices.

In a study that was published this summer in Nature Nanotechnology we have teamed with the group from the University of Strasbourg and focused on small-molecule OS N,N'-dioctyl-3,4,9,10-perylenedicarboximide (PTCDI-C8), which under suitable conditions forms nanosize elongated structures, i.e. supramolecular nanowires. Such supramolecular organic nanowires are ideal nanostructures for optoelectronics because they exhibit both efficient exciton generation as a result of their high absorption coefficient and remarkable light sensitivity due to the low number of grain boundaries and high surface-to-volume ratio. These properties make them suitable candidates for solar-energy pick-up. However, to harvest photocurrent directly from supramolecular nanowires it is necessary to contact them up with suitable metallic electrodes. In addition, efficient solar-cells need large areas. To this end, we have devised a method that, allows us to simultaneously integrate hundreds of supramolecular nanowires of PTCDI-C8 in a hexagonal nanomesh scaffold with asymmetric nanoelectrodes. Optimized PTCDI-C8 nanowire solar cells exhibit a signal-to-noise ratio approaching 10^7, a photoresponse time as fast as 10 ns and an external quantum efficiency >55%.



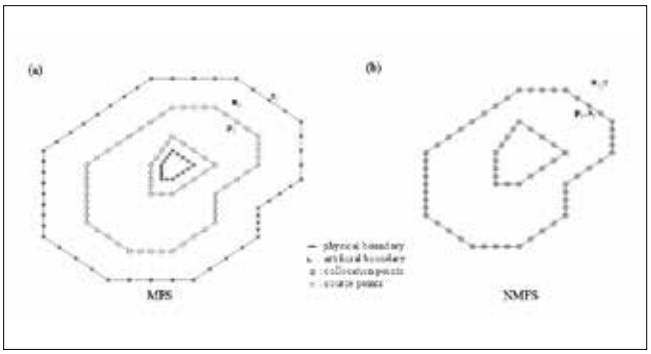
Time-dependence of photoexcited charge carriers current in polythiophene (P3HT) nanowires. Curves exhibit a double cusp. The first cusp occurs at shorter times due to arrival of the carriers drifting through ordered nanowires. In contrast, the second cusp occurs at longer times due to slower transport through disordered polymer regions. At higher bias voltage, the transit times reduce due to higher carriers velocity.



Comparison of measurement and Monte Carlo simulation of time-of-flight photoconductivity of organic semiconducting polymer between two coplanar electrodes. Top curve (squares) represents the measurement at higher number of photoexcited carriers. Bottom curve (circles) represents the measurement at lower number of carriers. Solid curves represents simulated photocurrent. The comparison demonstrates that the measured current exhibits faster decay at higher number of carriers than at lower. The measurement can be reproduced only when the velocity of simulated carriers is increased (dashed).

Laboratory for Multiphase Processes

(Head: Prof. Dr. Božidar Šarler)



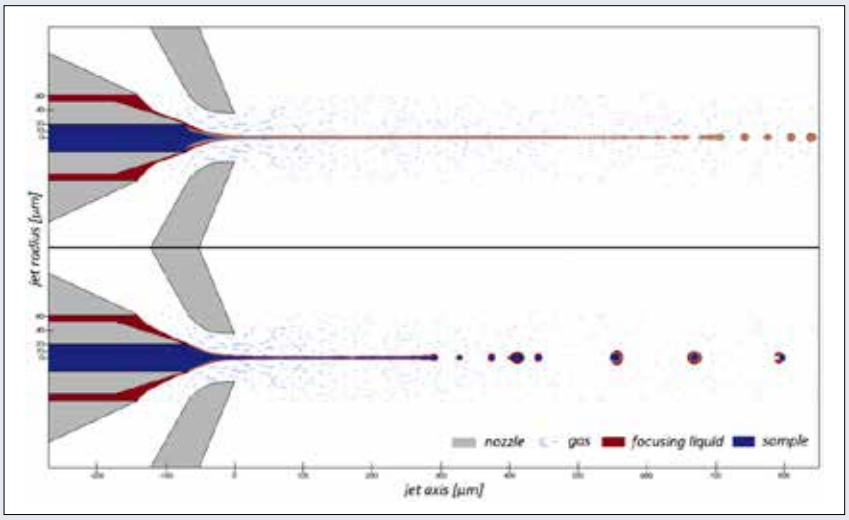
Discretisation scheme of classical method of fundamental solutions (a) and method of regularized sources (b).

Research

We have, together with the Taiyuan University of Technology, China further developed the non-singular method of fundamental solutions, where are the singularities removed with local integration, for problems with multiple anisotropic metallic grains in contact. We have developed formulation for elastic, thermo-elastic and plastic grain behavior. We have developed the method of regularized sources, where the solution is based on non-singular approximation of fundamental solution for Stokes flow in axial symmetry. We have as first developed a correction of the method which enables an accurate solution of the derivatives of velocity and pressure fields at the boundary.

The main scientific goal of the Laboratory for Multiphase Processes is development of meshless methods for multiphysics and multiscale simulation of materaials and processes. We develop meshless algorithms for coupled electromagnetic fields with solid and fluid mechanics on the microscopic and macroscopic levels. The algorithms rely on collocation with radial basis functions and/or fundamental solutions. The new computational approaches are are used in numerous processes, particularly connected with the thermomechanical processing of aluminium alloysa and steel. We started simulations of micromechanics and microfluidics, connected with the optimum sample delivery in femtosecond crystallography in the last period.

We have developed in collaboration with DESY, Hamburg a model of multiphase gas-liquid systems based on the phase-field formulation and applied it in simulation of gas-focused microjects. We have simulated the jets where in addition to the focusing gas there is a coaxial flow of two liquids which mix (alcohol-water) or do not mix (oil-water). We have calculated the length and stability for diferent liquids and focusing gases. We have with this enabled computational methods for proper adjustment of the experimental conditions an the forthcomming European XFEL in Hamburg, Germany, which will generate ultrashort x-rays 27000 times per second with billion larger intensity as current related experimental devices. The models have been verified on a large spectra of experimental data.

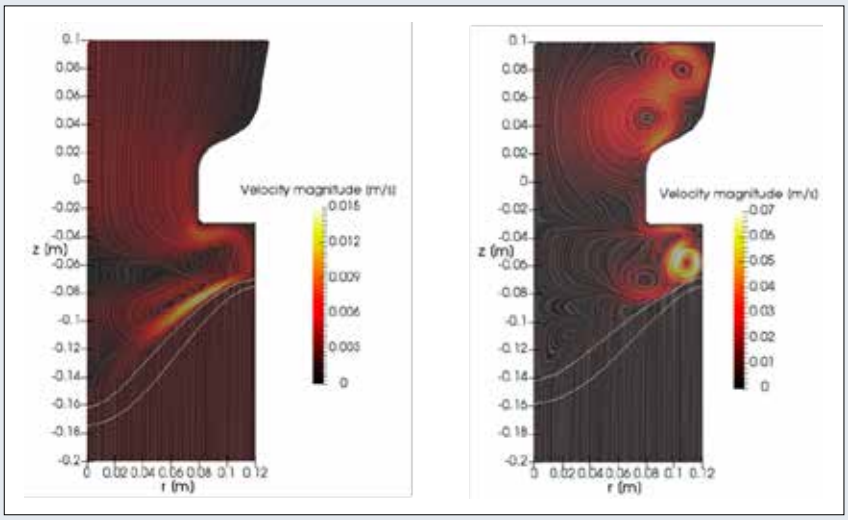


Simulation of flow structurein DC casting of aluinium alloys. Without influence of electromagnetic field (left). With influence of electromagnetic field (right).

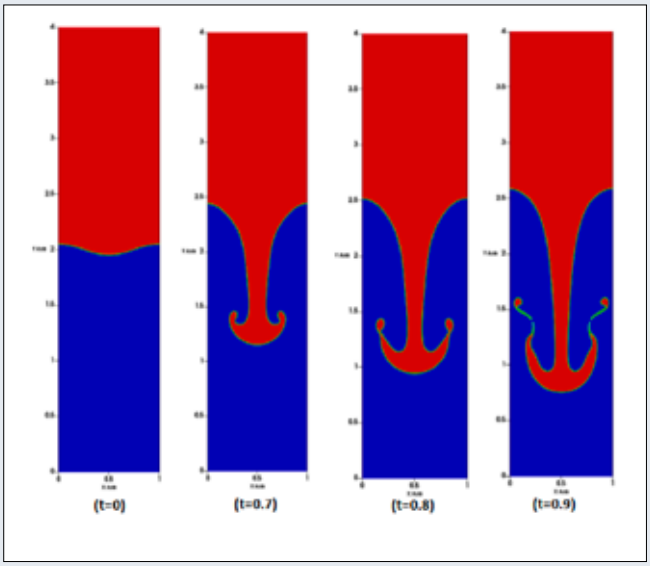
We have in collaboration with the Laboratory for Simulation of Materials and Processes at the Institute of Metals and Technology in Ljubljana developed a model of electromagnetic casting of aluminium alloys and steel. We have studied the influence of the electromagnetic parametsrs on flow structure, solidification and microstructure.

We have furhter developed local collocation method with radial basis functions for thermo-mechanical problems during phase-changes with elastic and viscoplastic meterial response. We have used the model for calculation of time dependent strains and stresses during solidification of metals. Based on the model of phase field and meshless approach we solved a spectra of instabilities in liquids with different density differences and surface tension effects.

The simulations of the microstructure have been upgraded with the possibility of formation of eutectic phase. We have used cellular automata method with the adaptively structured quadtrees for this purpose.
A paper where we first formulated meshles local radial basis function collocation method in 2006 is ranking among 1 % of mostly cited papers in the field of numerical methods. The paper where we formulated the method for non-linear Burger's equation in 2012 ranked into 5 % of most cited papers is in the field of applied mathematics.



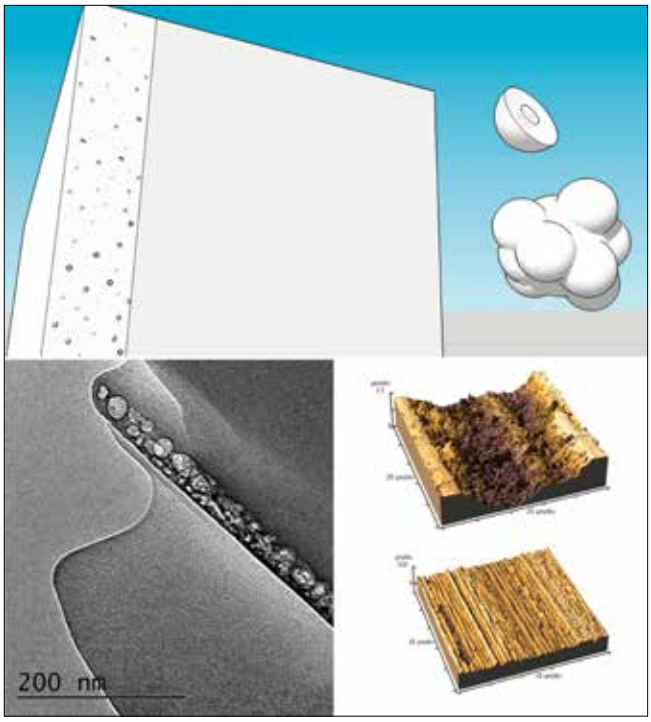
Simulation of flow structures in direct-chill casting of aluminium alloys. Without influence of electromagnetic field (left). With influence of elecromagnetic field (right).



Simulation of instability of two fluids. The fluid with larger density is on the top and the fluid with the lower density os on the botom. The surface tension has been taken into account.

Materials Research Laboratory

(Head: Prof. Dr. Matjaž Valant)



Transparent amorphous alumina nanocomposite

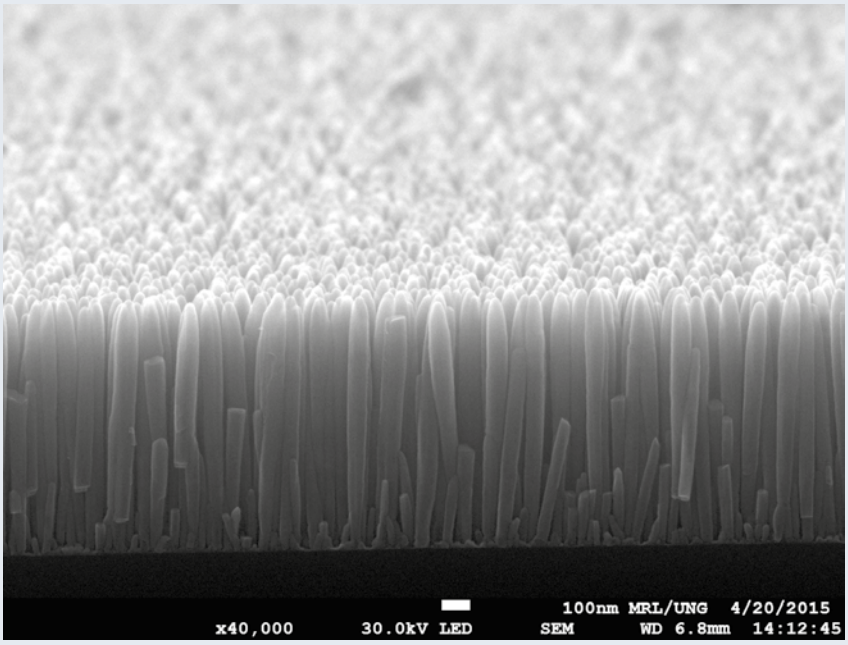
Material Research Laboratory was established in 2009 and has evolved in a sizable research unit with state-of-the-art equipment and diverse expertise of the team members ranging from synthetic and crystal chemistry, functional materials, surface science, theoretical and computational chemistry etc. We have maintained the initial research focus on environmental and electronic materials but develop it towards new exciting and advanced material systems and processes that include topological insulators, biocompatible materials, nanostructured photocatalysts and materials in extreme environments. This year the joint efforts of the team members resulted in some exciting discoveries and developments.

Research

We have developed a new method for high temperature stabilization of amorphous alumina. Based on the developed nanocomposite we have produced a new inexpensive coating for mechanical protection of glass surfaces with full optical transparency and exceptional tribological characteristics. The wear resistance exceeded that of the current advanced glass by a factor of 25-35 and the scratch resistance by more than an order of magnitude.

$PbTeV_2O_8$ phase has been discovered. A structural solution from powder x-ray diffraction data showed that the phase belongs to no known structural family. It is characterized by very low processing temperatures that enables integration with Al electrodes, polymer and paper substrates as a mid-permittivity capacitor.

In the framework of the scientific collaboration with Indian Institute of Technology Jodhpur and University of Modena (Italy) we have continued investigations of nanostructured oxide films (ZnO and TiO_2) doped with metals by scanning electron microscopy and cathodoluminescence spectroscopy. The purpose of these studies is the characterization of the morphology, porosity and structural defects in the films i.e. the key parameters that define sensing properties. A new collaboration has been established between MRL, Laboratory for Environmental and life sciences and University of Zagreb (Croatia) with the aim of synthesis and characterization of TiO_2-based composite nano-catalysts, where our role is mainly the characterization of the catalysts.



SEM image of aligned ZnO nano-rods (collaboration with Indian Institute of Technology)

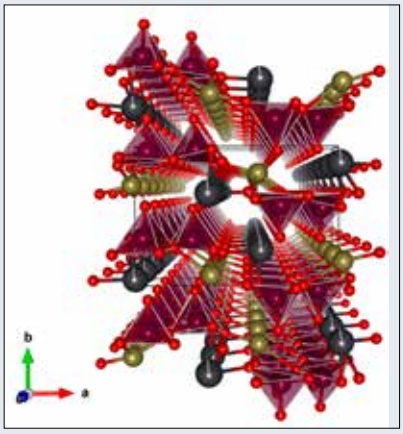
In collaboration with the University of Saint Etienne (France) we were investigating irradiation effects on Ge-doped optical fibers and glass nanoparticles. This research was supported with computational studies and simulations of the defects in the optical fibers and silicate glasses. We were also calculating the properties of defects related to oxygen-excess in pure silica and how their properties change when silica is doped with Ge.

We have been investing thin metallic films deposited on topological insulators (TI), which is relevant both from fundamental and applied standpoint (thermoelectric, catalytic and spintronic applications). The main aims are characterization of a growth mechanism of metal thin film on TI surface and understanding of how an electronic structure of the TI surface is modified by the metal deposition.
We continued with the development of high performance magnesium alloys applicable in biomedicine and lightweight mobility sectors. Using photoemission spectroscopy we were studying magnesium surfaces exposed to oxygen and water vapor in order to understand early stages of oxidation. Characterization of the corrosion is key factor for designing new Mg based materials.

Properties of polymeric materials of natural and synthetic origin have been studied using polymer theory, computer simulations and experiments. Monte-Carlo simulations of an effect of side-chains and broken symmetry on formation of secondary structures in protein-like systems revealed the presence of helicoidal structures at low temperatures.

We were able to show that a electrochemical synthesis of polysilanes through the reduction of chlorosilanes is, due to mild reaction conditions, extremely interesting alternative to synthesis with liquid sodium metal. By combination of experimental methods and theoretical estimates, we confirmed presence of branching defects in the molecular structure of the synthesized polymers. A number of the defects and, consequently, the molecular size depend on the synthesis conditions.

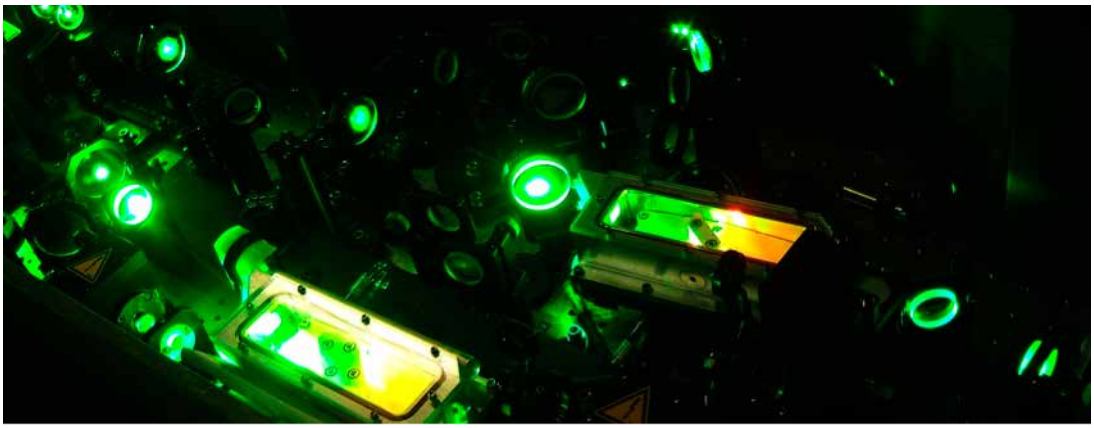
We studied charge carrier mobility in methyl ammonium lead iodide perovskites solar cells. We found that the mobility in this type of solar cells greatly depends on grain sizes. The gained knowledge can help development of new type of solar cells. We also studied Fe_2O_3 thin films in water splitting studies. Nanostructured Fe_2O_3 thin films were obtained after heat treatment of Fe/Fe-oxide films at elevated temperatures.



Newly discovered phase of $PbTeV_2O_8$

Laboratory of Quantum Optics

(Head: Prof. Dr. Giovanni De Ninno)



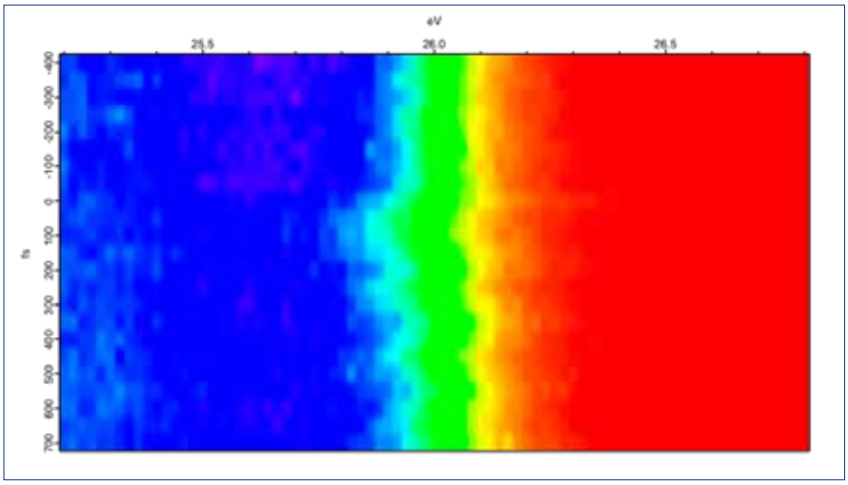
LKO focuses on investigating ultrafast response of electrons in topological insulators, superconductors, and metal/organic interfaces, with potential use, e.g., in spintronics and energy harvesting. LKO also participates in the development of the FERMI free-electron laser, one of the most powerful laser sources worldwide, which is opening unique opportunities for exploring the structure and transient states of condensed, soft and low-density matter. In addition, LKO uses x-ray synchrotron radiation for characterization of atomic and molecular structure of new functional (nano)materials and biological and environmental samples.

Researchers at the Laboratory of Quantum Optics (LKO) use ultrashort laser pulses, spanning the spectrum from the visible to the x-ray region, for basic and applied research in physics and material science. When such pulses interact with matter, they induce ultrafast electronic, structural or chemical changes, which provide information about the out-of-equilibrium states of matter and serve as input for the design of new materials.

Laboratory techniques:
LKO hosts the CITIUS high-harmonic generation (HHG) light source, producing coherent femtosecond (10^{-15} s) pulses in the wavelength range from extreme-ultraviolet (XUV) to soft x-rays. The source is driven by an ultrafast Ti:SA laser, generating 35 fs pulses at 5 kHz with an energy of 3 mJ. By focusing these pulses onto a noble gas jet, high harmonics of the driving laser frequency are generated, spanning the spectral range from 80 to 20 nm.

The source is used in experiments in a pump-probe configuration, where part of the driving laser beam (which can first go through a non-linear crystal to generate the second or third harmonic or an OPA for obtaining a wavelength-tunable pump pulse) excites electrons in the investigated material to higher energy levels, which are then probed by ultrashort HHG pulses using a hemispherical or time-of-flight electron analyzer. This provides important information on the dynamics of the out-of-equilibrium states in the sample. The CITIUS light source can be used in a large variety of scientific and technological fields, ranging from physics to chemistry, and from biology to medicine.

Temporal evolution of electronic bands near the Fermi level in $EuFe_2As_2$, cooled to liquid nitrogen temperature.



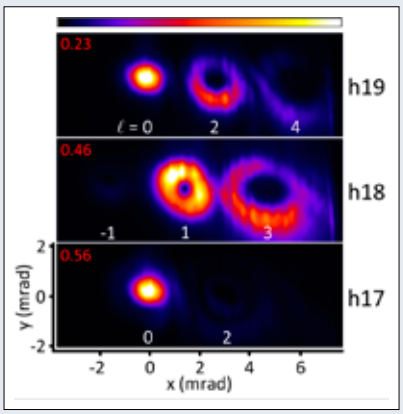
Recent activities:

The main activities were centered on the ultrafast response of electrons in iron-based superconductors. These materials are interesting because they exhibit the coexistence of superconductivity and magnetism, although these two phenomena are believed to be mutually exclusive. Moreover, iron compounds show high-temperature (HT) superconductivity, which is highly unlikely since iron is a magnetic element and the structure of these compounds is quite different from the well-known copper-based HT superconductors. To understand the origin of this behavior we used the pump-probe approach to study the electronic properties in out-of-equilibrium conditions. The sample was excited with infrared radiation and the time-evolution of the energy bands near the Fermi level was monitored using pulses at 60 nm. The characteristic oscillations in the electron density are likely fingerprints of coherent lattice vibrations resulting from the coupling between the electronic and vibrational degrees of freedom.

One of the LKO activities focuses on the CITIUS source development. We have recently implemented a method for producing XUV pulses that carry a tunable amount of orbital angular momentum (OAM) using two-color wave mixing. Such light beams, also called optical vortices, may find use in optical communications, microscopy, biophotonics, optical manipulation of nanoparticles, and materials characterization. In particular, XUV vortices will allow gaining further insight into local symmetry, chirality, or magnetic properties of the sample under investigation. The work is currently under review in *Nature Physics*.

LKO participates in the development of the FERMI free-electron laser (FEL) in Trieste, Italy. Recently, an important step was done towards generation of fully coherent sub-femtosecond gigawatt pulses in the water window (2.3 to 4.4 nm), which will allow studying ultrafast reaction mechanisms in dilute and solid matter at the nanoscale. We applied chirped pulse amplification, a technique used to generate extremely powerful femtosecond pulses in the infrared and visible spectral ranges, to a seeded free-electron laser in the XUV and demonstrated a relevant reduction of the FEL pulse duration with respect to that obtained in the standard operation mode. The results were published in the journal *Nature Communications* (doi:10.1038/ncomms13688).

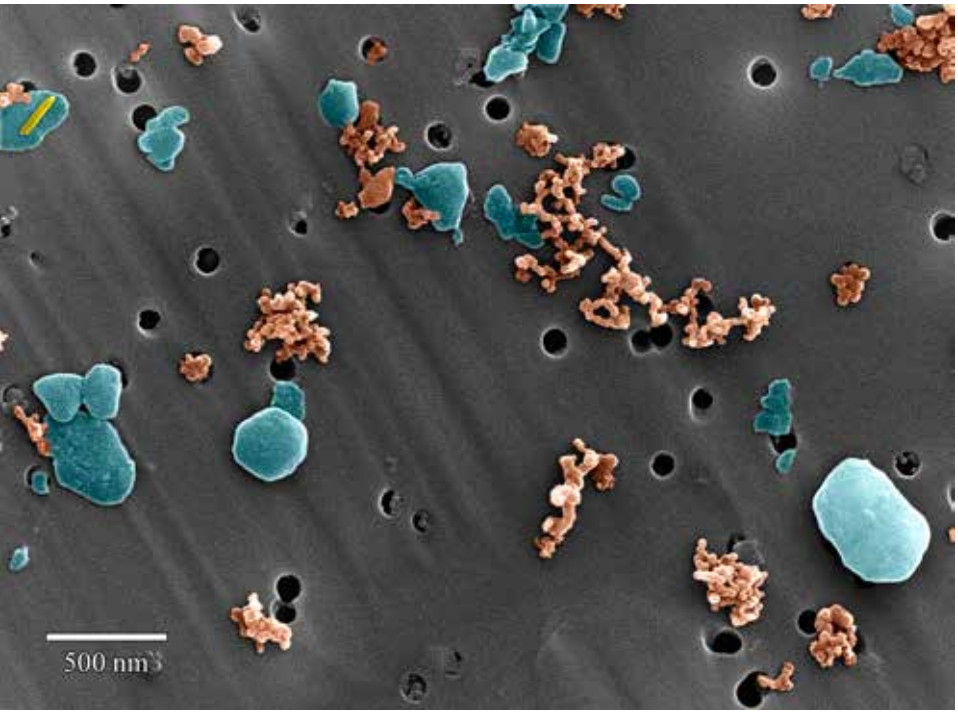
For characterization of atomic structure of different new materials and biological samples with x-ray absorption spectroscopy methods (micro)XANES and EXAFS we use synchrotron radiation at different European SR-laboratories (ESRF, Grenoble, France; Elettra, Trieste, Italy and PETRA III at DESY, Hamburg, Germany). We participate in the development of new technologically important (nano)materials: i.e. cathodes for Li-ion, and Li- and Mg-S batteries with high energy density, different (photo) catalytic materials for water cleaning and other technological processes. To resolve problems of environmental pollution with heavy metals (phytoremediation), and to increase concentrations of essential elements in the edible plant parts (biofortification), we use a combination of x-ray spectroscopy and sub-micron x-ray microscopy to efficiently assess metal bioavailability and toxicity, and gain more knowledge on the mechanisms of metal uptake, accumulation and detoxification in living organisms.



Transverse profiles of the ring-like shaped optical vortices obtained at CITIUS with the two-color wave-mixing scheme. For each harmonic (h) of the driving laser, the OAM content (*l*) can be controlled by adjusting the intensity of the two driving lasers.

Center for Atmospheric Research

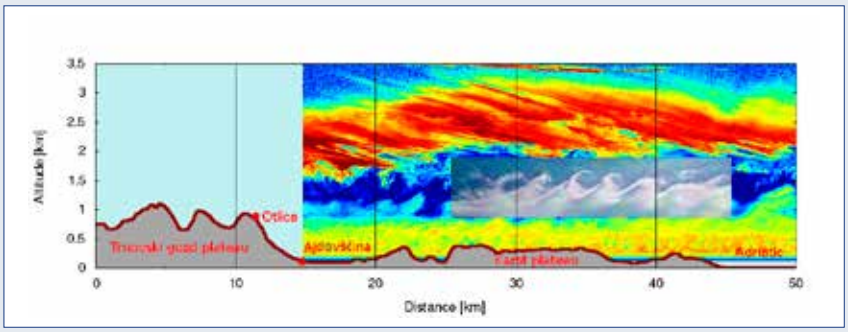
(Head: Prof. Dr. Samo Stanič)



Atmosphere is a relatively thin envelope of gasses and suspended microscopic particles, the so called aerosols, and it is crucial environment for sustaining life on Earth. Center for Atmospheric Research focuses on the study of physical processes in the atmosphere using remote sensing and in-situ measurements as well as on modeling of atmospheric phenomena. Our research activities include the investigation of aerosol sources, aerosol propagation, their influence on the atmospheric optical properties, the dynamics of vertical atmospheric structures and the impact of atmospheric conditions on astrophysical observations. The Center is located at the University of Nova Gorica Ajdovščina site, runs the atmospheric observatory at Otlica and collaborates with the Pierre Auger Observatory in Argentina and the Cherenkov Telescope Array Consortium.

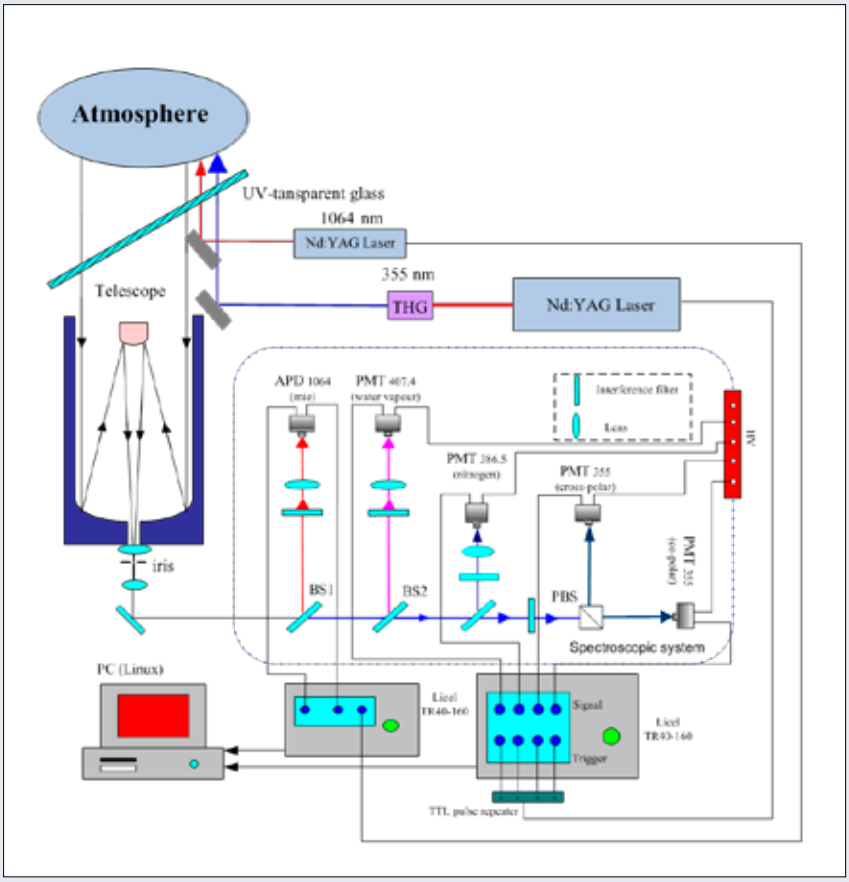
Lidar research

Lidar-based remote sensing of vertical aerosol loading profiles and their temporal dynamics is a powerful tool for regional tracing of air-mass movement, for the investigation of local aerosol emitting processes and for the study of the structures within the planetary boundary layer. Center for atmospheric research employs three lidar systems in these activities. One of them is a mobile elastic and fluorescence lidar with the capability of three-dimensional scanning of the atmosphere and the identification of biological aerosols through the fluorescence of the tryptophan amino acid, present in organisms. A stationary lidar is located at the atmospheric observatory Otlica (Mie lidar with the capability of zenith angle scanning) and another stationary lidar (polarization and Raman lidar) is in the final stage of development at our laboratory in Ajdovščina. In 2016, we performed a combined analysis of the lidar data on aerosol distributions, in-situ measurements of particle concentrations and sizes, black carbon content and water vapor concentration obtained from a differential wet delay measurement of GNSS signals at two receivers. We demonstrated that physical and optical aerosol properties, as well as their spatial distribution in the atmosphere, differ with respect to their origin. Stable weather conditions in the atmospheric boundary layer were found to additionally prolong the presence of pollutants within the Vipava valley. Aerosols from different sources were sampled and their physical and chemical properties characterized by scanning electron microscopy, which allowed us to deduce how they affect atmospheric optical properties.



Bora wind studies

A phenomenon of strong, gusty, downslope wind, where the cold air flowing over an orographic barrier sinks and accelerates as it encounters warm air at the lee side is generally referred to as Bora wind. In the Vipava valley, Bora occurs when cold air-masses move over the Eastern Alps and down the steep slopes of the Trnovski Gozd plateau. It is more frequent in the winter and can reach speeds up to 52 m/s at the valley floor. Of particular importance to Bora studies is continuous monitoring wind properties with temporal with high temporal resolution, which we perform since February 2015, and regular lidar measurements of atmospheric structure and its dynamics, using aerosols as tracers for airmass motion. In 2016, we focused on the characterization of air-flow categories that occur in the Vipava valley, on the investigation of the corresponding atmospheric structures, and on the studies of the periodicity of Bora gusts using high temporal resolution wind data. As a result, we published a paper entitled *Lidar measurements of Bora wind effects on aerosol loading* in the Journal of Quantitative Spectroscopy and Radiative Transfer, which describes the first characterization of atmospheric Kelvin - Helmholz waves in Slovenia. We also developed and tested a new method for measuring wind speed and direction at the cloud base height, using clouds as tracers and a combination of active (lidar) and passive (camera) remote sensing, and started with air-flow modeling over an orographic barrier using CFD modeling tools.



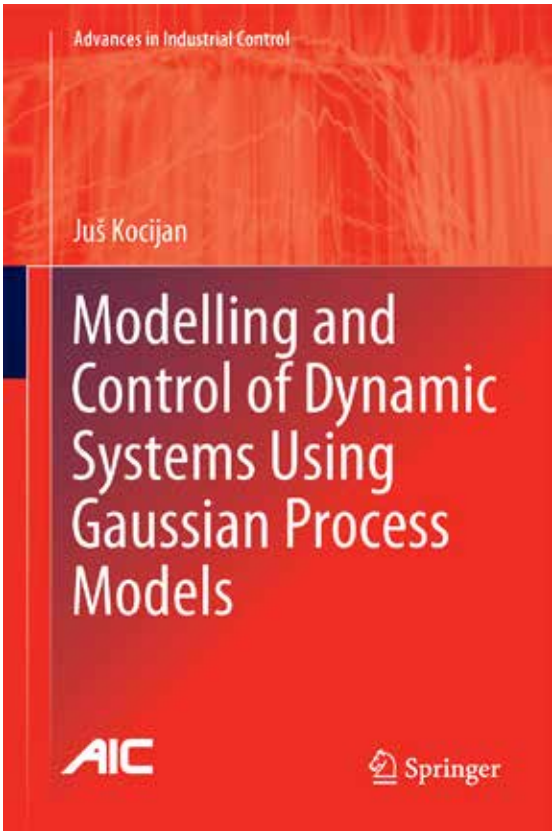
Applicative research

The observatory at Otlica above Ajdovščina (965 m above sea level) is a node in the national grid of meteorological and environmental stations, administered by the Slovenian Environmental Agency, and a member of the European Virtual Alpine Observatory. Standard monitoring data for temperature, humidity, wind speed and direction, ozone concentration and solar irradiation, are available on line at the Agency's and Center's web portals, as well as a live web camera oriented towards the south-west, which allows us to observe the approach of weather fronts. In addition, the observatory hosts a Mie scattering lidar with vertical scanning capability, an ionospheric GNSS monitor, used for the monitoring of water vapor concentration and an aethalometer that monitors the presence of black carbon.

Center for Systems and Information Technologies

(Head: Dr. Donatella Gubiani)

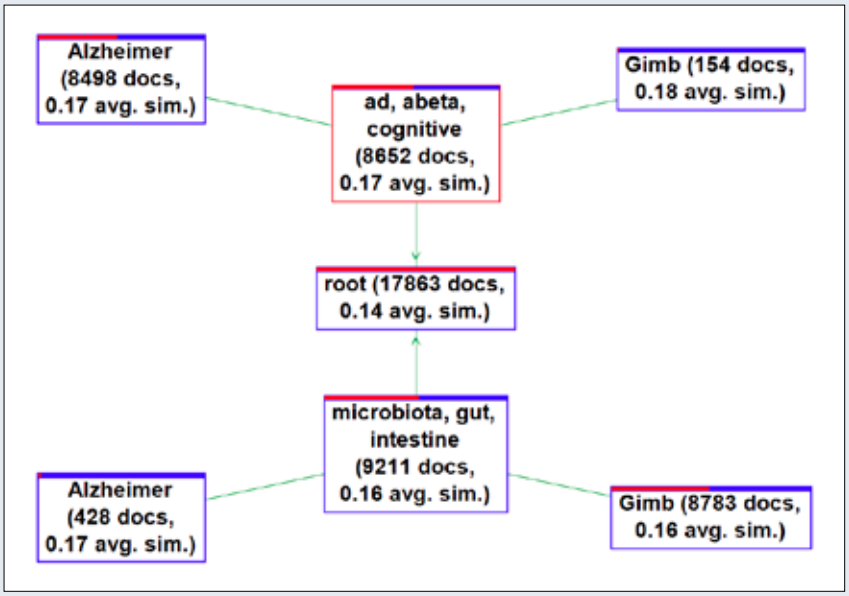
The Center for Systems and Information Technologies (CSIT) is an interdisciplinary research group with the activities at the intersection of computer science and informatics, mathematics, control systems technologies, and process engineering. It develops novel approaches to modeling and applies them to a wide range of problems, from industrial engineering practice to education and biomedicine. Methods for intelligent data analysis are being developed and applied to the domains where IT support is required for knowledge discovery aiming at understanding complex diseases, phenomena in the environment, or problem solving in various complex domains, especially in engineering. In mathematics we contribute mainly with a study of algebraic hyperstructures and with the stability and robustness for dynamical systems.



In 2016 the Center for Systems and Information Technologies (CSIT) employed seven researchers.

In the field of geographic information systems and spatio-temporal databases, the center focused on analysis of data from positioning and tracking devices. Concerning positioning systems, cellular networks have been studied in order to better understand their architecture and evolution in time and space. This evolution, combined with Timing Advance measurements, was used to improve the position estimation in fingerprinting positioning systems. Focusing on trajectories, the sequences of positions of a device associated with a timestamp, we are studying how different algorithms can be applied to describe at different abstraction levels the movements, in order to analyze them and discover further information. This is a joint work with the University of Udine and international companies.

In the field of knowledge discovery from large textual databases, the center focused on the development of innovative methods for knowledge discovery in biomedical applications. We focused on cross-domain literature mining methods and applied them to the problem of better understanding of the phenomena manifested in the context of “Brain - Gut Axis”. We proposed a literature mining methodology with improved efficiency by exploring outlier documents. The results support the hypothesis of neuroinflammatory nature of neurodegenerative diseases. In this topic, we collaborate with the Jožef Stefan Institute.



In collaboration with the Jožef Stefan Institute and Temida d.o.o. company, we continued with activities in the area of development and use of knowledge technologies for improving education approaches. We investigated needs and options for extensibility and scalability of a mobile application QTvity to better meet the educational requirements in new, potentially very different educational settings, especially in terms of the number of students, where the application can really make a difference. The work was presented at the e-Learning conference in Bratislava where we received an award for the best contribution. We also published a chapter Opening up education: towards affordable and sustainable solutions in a book published by IGI Global, Hershey, Information Science Reference.

The research on modelling of dynamic systems and applications of these models is pursued in the framework of research projects at Jožef Stefan Institute. Research activities were pursued in two directions: the development of Gaussian-process models and the development of model-tree ensembles. The research of modelling methods for environmental systems continued in the first track. Besides, a scientific monograph on modelling and control with Gaussian process models authored by a member of the center was published by Springer publishing house. The research of methods based on model-tree ensembles was focused on multivariable systems and on comparison with other modelling methods.

In collaboration with the University of Ljubljana, an experimental research of non-stationary temperature field on a boiling surface has been performed using the high-speed thermographic camera, which was the basis for solving the inverse heat conduction problem in the range of boiling crisis. Collaborative work with the GI ZRMK continued on the analysis and preparation of expert groundwork for national legislation in the field of nearly-zero energy buildings and long-term strategy of renovation of the building stock.

In the field of algebraic hyperstructures we continued our research on both pure and fuzzy hyperstructures. We presented a new method to compute the number of regular reversible Rosemberg hypergroups associated with binary relations. A program written in MATLAB was proposed to perform this computation. Moreover, we introduced a new type of semihypergroups, called complementable semihypergroups, proving that the simplifiable semigroups, groups, complete hypergroups are examples of such semihypergroups. In the framework of fuzzy hyperstructure theory, we defined the degree to which a fuzzy subset on a hypergroup is a fuzzy hypergroup by means of the residuated sets, constructed using the minimum t-norm. In this context, the center was collaborating with researchers from Iran and Czech Republic.

Stability theory for so-called time scale systems (hybrids of ODEs and difference equations that appear in modelling) was developed. Also, new results were found for shadowing (applicability of numerical models) in non-smooth systems via topological and ergodic approach.

Wine Research Centre

(Head: Doc. Dr. Melita Sternad Lemut)

Wine Research Centre (CRV) is uniting the researchers and multidisciplinary research activities that are related to the fields of viticulture and enology (plant physiology, biochemistry and pathology; viticulture and wine-making technologies; sustainable viticulture; fruits, grape and wine analytics; microbiology and molecular biology of yeasts, grapes and wine; biotechnology). We operate in the laboratories of Lanthieri Mansion in Vipava and in the fields, including the University's own vineyard. Our primary studied plant is grapevine (with the processing of grapes to wine) but we also focus to some fruit plants, olives and apple wine (cider). We deal with both applicative research, addressing current problems in the field, as well as expert, more future-oriented research.

The research activities of Wine Research Centre (CRV) in 2016 were focused on cooperation with Norwegian partners on the project "New cider products from Hardanger", working on ARRS postdoctoral project "Facilitating green care in viticulture by means of metabolomic-based front line conception" and to the closure of one and the beginning of another doctoral project.

The project with Norwegian partners is carried out in cooperation with local cider producers and Research Institute NIBIO (Ullensvang). Within the project our members conducted a series of technological experiments with the aim to study potential for cider quality improvements. We tested ten new technological strategies in comparison with the traditional procedure. Within each of the technological methods, we carried out conventional (commercial yeast) as well as the spontaneous fermentation (naturally present yeast). After bottling of trial ciders, the samples were prepared for the analysis of polyphenols and aromatic compounds by modern, metabolomics methods. Knowledge and approaches in sensory analysis of wine were adapted to cider and the experiences passed on to Norwegian partners. We also continued to work on the study of the ecology of wild yeasts associated with cider production of Hardanger area. For the second consecutive year, we conducted sampling of ten locations early in the season and during the harvest of apples, and isolated about 1300 yeasts from different backgrounds linked to the cider (orchard, soil, insects, cellar, ciders). In parallel, the samples were taken for direct extraction of DNA, for which we use a newer approach Illumina metabarcoding to determine microbiom. Yeasts isolated in 2015 were identified and the characterizations of strains on the technological parameters important for cider production were carried out. The selection of yeasts was used to perform experimental fermentations of apple juice with the aim to test the potential of isolated indigenous yeasts for the production of a typical local cider.

Within ARRS project we investigated the potential of alternative, more environmentally friendly way to control grapevine biotic diseases. In addition to the viticulture approach of early leaf removal, a biological control using indigenous microorganisms is probably one of the safest ways to control fungal diseases in the vineyard. The aim of the project is thus to explore the potential of existing CRV yeast collection as biological agents against phytopathogenic fungi in combination with studied viticulture techniques. After the first selection of yeasts based on literature and preliminary results, they were subjected to the identification methods, followed by the development of methods for testing the formation of substances that can inhibit the growth of pathogenic fungi (e.g. siderophores, the compounds that play an important role in the mechanism of competition for nutrients; the enzymes, which may be responsible for the disintegration of the fungi cell walls; and various antifungal volatile organic compounds). On the basis of these screening tests we are preparing the trials with the most promising yeasts on the tissue cultures of selected grape varieties.

In June, the member of CRV Karmen Bizjak Bat successfully defended her doctoral thesis working on determining the authenticity of origin and method of production (organic vs. conventional) of Slovenian apple juices, under the mentorship of prof. dr. Branka Mozetič Vodopivec and prof. dr. Nives Ogrinc. In October, prof. Mozetič Vodopivec became a mentor (together with doc. dr. Dorota Korte) to a new young researcher at the University of Nova Gorica, Jelena Topić. Two new members joined the group in November, both with broad international experiences: doc. dr. Katja Šuklje (Viticulture) and doc. dr. Guillaume Antalick (Oenology). In December the group was joined by a new doctoral student Adesida Rowland, who will work under the supervision of doc. dr. Lorena Butinar and doc. dr. Melita Sternad Lemut, performing detailed studies of the potential bio-fungicidal properties of the yeasts.

Research Centre for Humanities

(Head: Doc. Dr. Aleš Vaupotič)

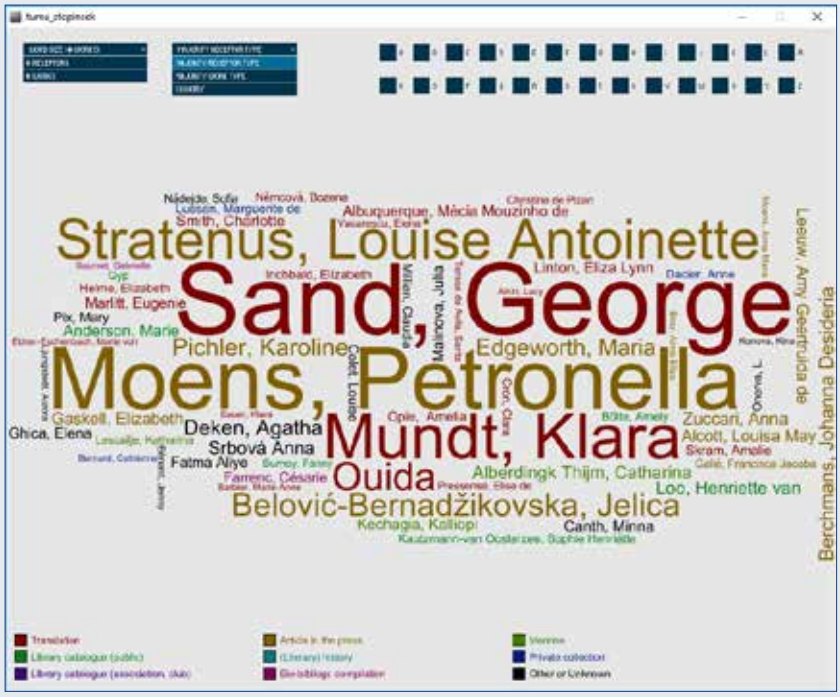
Research Centre for Humanities operates in the fields of literary studies, cultural history and digital humanities. The approaches are mutually connected. Comparative literary studies enable reflecting the complexity of human communication and forms of coexistence. Cultural history is expanding historical research on the level of cultural practices. We understand digital humanities as critical thinking methods of the humanities in the context of the progressive digitalization of culture and communicational media. Topics: the role of writers in the literary culture; literature at the junctures; questions of humanities in the context of digitization; historical transformation of scientific institutions, environmental perception in Slovenia.

Research activity

Aleš Vaupotič, Assist. Prof., PhD. is the head of the Research Centre for Humanities. In the field of literary studies work is organized in three research areas. Željko Oset, Assist. Prof., PhD conducts research in the field of cultural history.

In 2016 we concluded a European project (HERA CRP) *Travelling Texts 1790-1914: The Transnational Reception of Women's Writing at the Fringes of Europe* (TTT). It is a broad European cooperation, which is most clearly represented in a new online virtual research environment Women Writers VRE, which integrates the existing database of cultural and literary history, and allows for a wide - and multilevel - cooperation in research on literary authors in Europe and also beyond its borders. The project was exploring women's participation in transnational exchanges of literary texts from historical and geographical perspective, the role of women as authors, translators and cultural mediators. The framework of this research is set to use the latest techniques of digital humanities, such as interactive data visualization, which was developed in collaboration with the Computer Vision Laboratory of the Faculty of Engineering and Computer Science, University of Ljubljana. This is the first field, led by Katja Mihurko Poniž, Assoc. Prof., PhD.

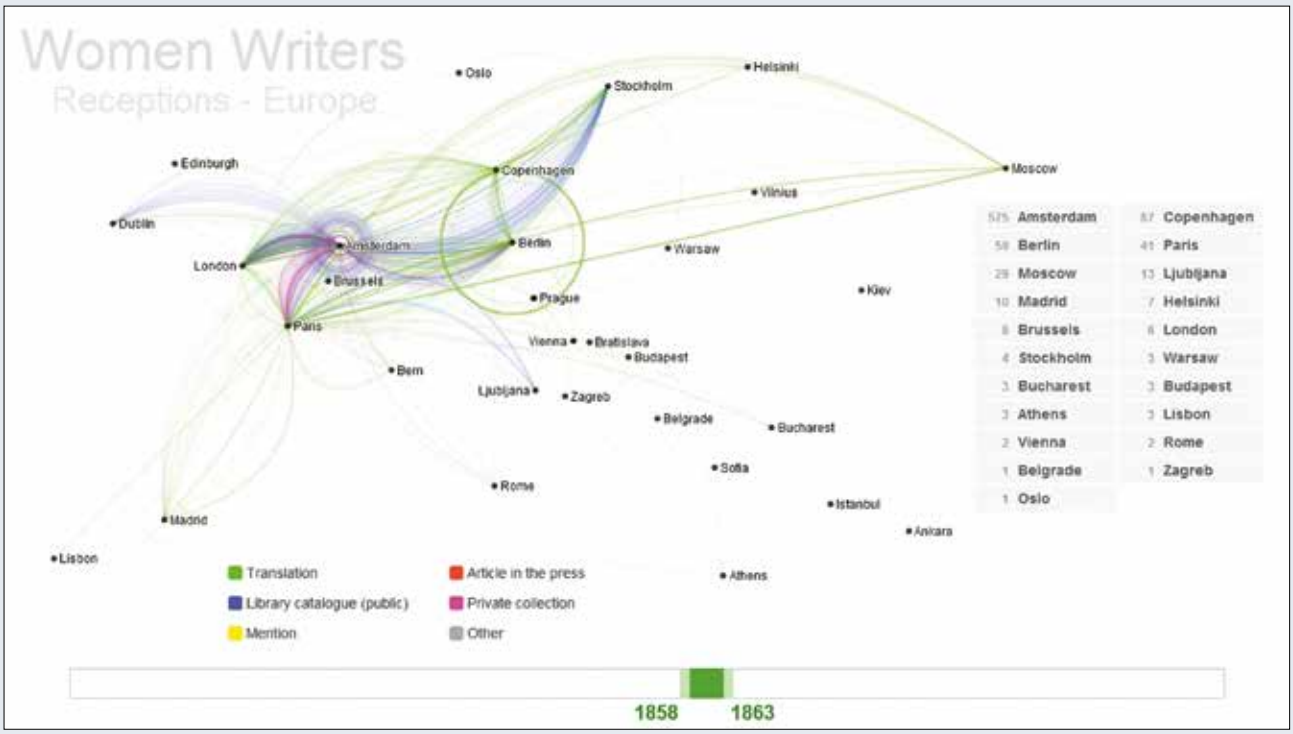
In the research group special attention is dedicated to the geographic and cultural space in which we work - the junctures of Slavic and Romanic cultures. In this context we are dealing with literature at the junctures such as: literary images of foreignness, literary reception, contacts and translations, interculturalism, migration, etc. Ana Toroš, Assist. Prof., PhD, research work is oriented to the studies of poetic and translation works by Alojz Gradnik. At the same time she continued to do research work in the area of literature of Trieste with emphasis on the period of the First World War.



Young researcher Megi Rožič, PhD, has connected the first two fields of the research centre. In 2016 she completed her doctoral dissertation on how the experience of migration reflected in the autobiographical works of selected contemporary literary creators Slovenian literary polysystem and how this experience affects their perceptions of nationality, culture, language, borders and builds their identity. The third research focus expolres the relationship between literature and new media in the perspective of the macro changes in world history.

In this context, attention is devoted to the rapidly evolving field of digital humanities and review of new media writers from Slovenia and the world, particularly their attitude towards new media art at the edge of language. Aleš Vaupotič, Assist. Prof., PhD, expanded his research including issues of research organization of interdisciplinary cooperation. Within his doctoral research young researcher Rok Andres has associated literature with plural media language of theatre.

Željko Oset, Assist. Prof., PhD, in the field of cultural history has studied two sets of issues of contemporary cultural history: the history of the Slovenian Academy of Sciences and Arts and the social image Teharje kosezi community from the Middle Ages to the First World War. He began to explore the presence and development of ecological perception in Slovenia during the communist period. The centre employs young researchers Rok Andres and Mateja Eniko. Mateja Eniko focuses on the study of Slovenian and foreign contemporary poetry, especially the image of the artist and self-reflection in poetry.

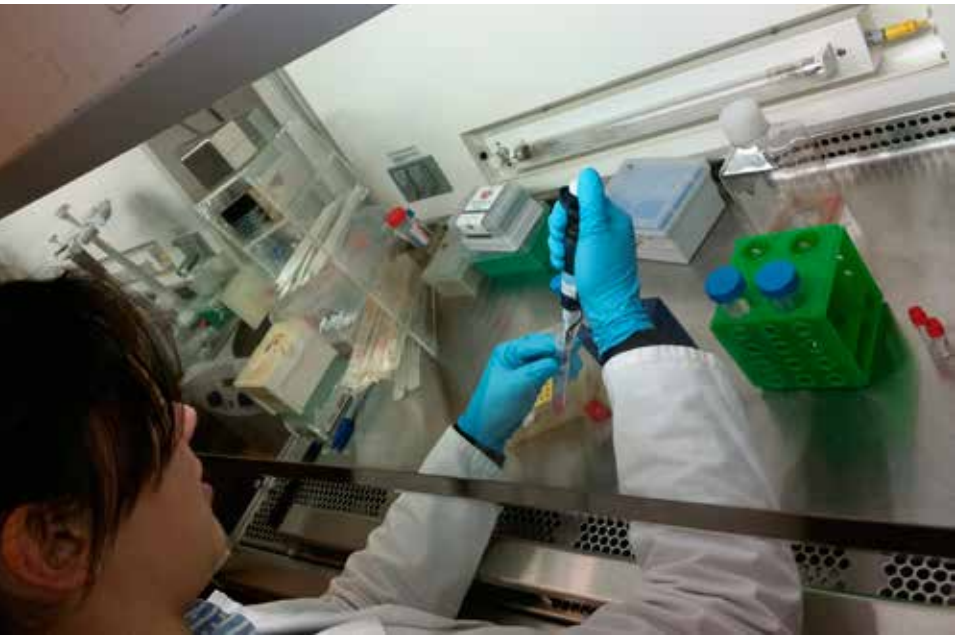


Center for Biomedical Sciences and Engineering

(Head: Prof. Dr. Tanja Dominko)

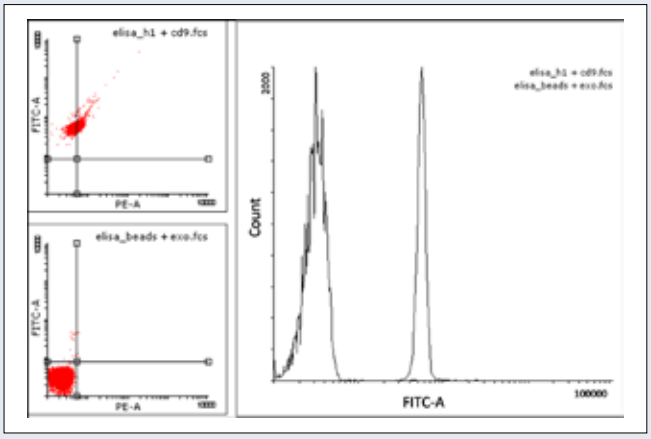
Center for biomedical sciences and engineering has developed several research priority areas, which together focus on a common interest – to jointly explore modern technologies in biomedicine, bionanotechnology and engineering, with a focus on regenerative medicine approaches to develop new solutions for age-related diseases, including cancer and neurodegeneration.

We are involved in projects related to regenerative medicine, mechanisms of pain and neuroinflammation, drug screening and drug discovery, host pathogen interactions and antibody-related biotechnologies applied to nanomedicine. We offer know-how in neurobiology, cell biology and pharmacology; libraries for on-demand antibody screenings and biocompatibility tests with 3D culture platforms as alternatives to in vitro tests.



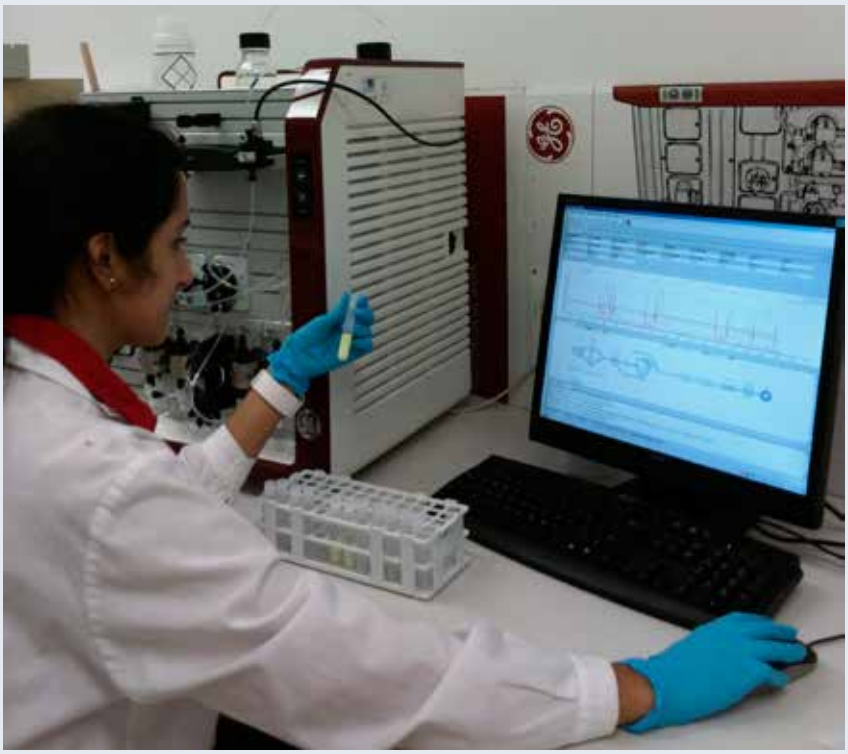
Exosome isolation.

Center for biomedical sciences and engineering continued with intensive basic and applied research in the field of biomedical sciences and biotechnology. Basic research on chronic pain continued with the studies of active soluble mediators such as ATP release, which are involved in coordinated and harmonized neuronal and glial responses. In pathological conditions involving sensory nervous system, elevations in extracellular ATP levels are believed to be one of the main reason for neuronal sensitization. P2X3 receptors are nanomolar ATP sensors that modulate responsiveness from sensorial afferents. Our experimental evidences demonstrated that activation of P2X3 receptors is associated to the amplification of the purinergic responses via further release of ATP. We showed that P2X3 receptors interact with Panx1 in sensory neurons and that molecular coupling between P2X3, CASK and Panx1 contributes to decoding of the complex purinergic signaling involved in nociception, which represents a novel and interesting mechanism of pain regulation that could be precisely targeted in order to alleviate tedious disorders of sensory neurons. In 2016 we have finalised the publication of ATP release mechanisms from sensory neurons. In addition, we have strengthed the collaboration with the Centre for Systems and Information technologies at UNG (Tanja Urbančič and Donatella Gubiani) and the Information Knowledge technology department at Jožef Stefan Institute in Ljubljana in the field of neurodegenerative diseases and gut microbiome.



FACS characterization of nanobodies for the detection of exosomes.

In the collaboration with ICGEB, we finalized the project focused on mechanisms of infection with oncogenic papillomaviruses. We further characterized interaction of minor capsid protein L2 with host sorting machinery and elucidated how this affects disassembly of HPV virions during the infection. Aditionally, we performed preliminary studies how environmental pollutants, such as TiO_2, contribute to HPV infection and infectious particle production. Research on host pathogen interaction and virus-related cancerogenesis have been advanced also by establishing a collaboration with the Faculty of Pharmacy UL and University medical centre Ljubljana – Division of Gynaecology and Obstetrics. Major goal of the collaboration is to study involvement of APOBEC proteins in the infection and oncogenesis of HPV viruses in cervical cancer.

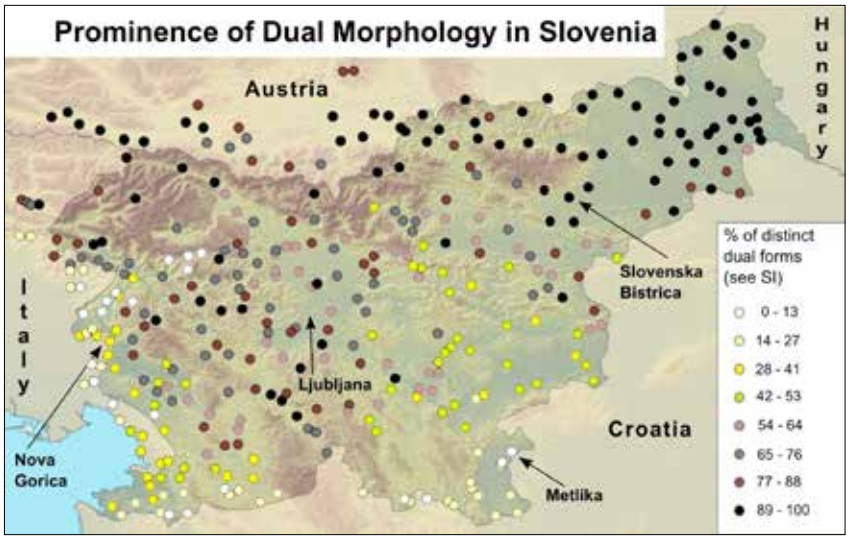


Characterization of recombinant proteins with FPLC – Fast Protein Liquid Chromatography.

Applied research related to isolation and characterization of recombinant antibodies progressed with a new project, part of which was also recruitment of additional researchers. Postdoc Elisa Mazzega took care of the wet lab (isolation, production, and characterization of nanobodies) whereas Sara Fortuna initiated a new research line by implementing the framework for in silico modeling of nanobodies. Each of them supervised one first level student preparing his diploma work. Furthermore, we hosted for one month Milica Popovic, a Serbian colleague with whom we obtained a bilateral collaboration grant. Scientifically, we progressed in the characterization of nanobodies specific for different antigens. Specifically, anti-p53 nanobodies able to prevent the binding of the natural binder Twist1, *in silico* designed mutants of anti-HER2 with improved biophysical characteristics, and nanobodies binding extracellular vesicles biomarkers. Side projects were performed to support the colleagues of the Forest National Institute with biochemical data relative to drought-stressed beech seedlings and to assess the opportunity to develop nanobodies against microalgae. Finally, we began a collaboration with the Animal hospital of Postojna with the aim of developing a project of comparative oncology exploiting the availability of canine spontaneous tumors.

Center for Cognitive Science of Language

(Head: Doc. Dr. Rok Žaucer)



Center for Cognitive Science of Language is an interdisciplinary research center of the University of Nova Gorica. Our core expertise is in formal generative linguistics, which we use as a foundation for engaging in other domains of language-related cognitive science – especially language processing, language acquisition and bilingualism.

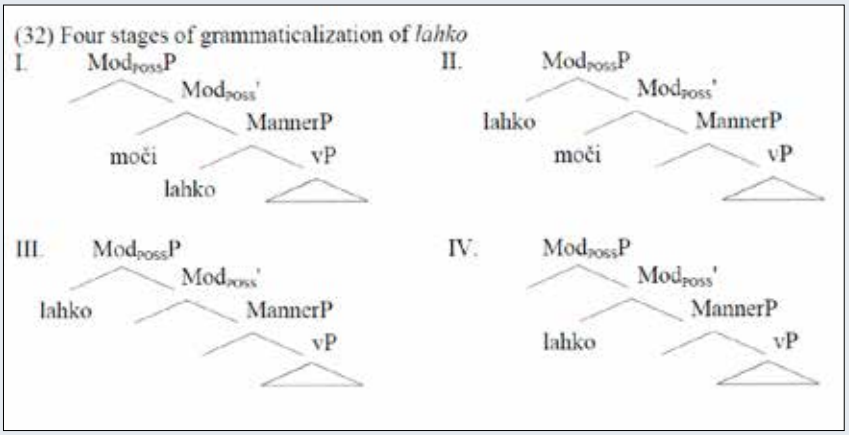
At the focus of our research are investigations of theoretically relevant syntactic and semantic/pragmatic aspects of different languages. We strengthen the reliability of our data and analysis assessments by using corpora, large judgment samples, and various behavioral experiments (e.g. sentence production for comparing models of morphosyntactic agreement, reaction times in wh-word analysis, developmental tasks for studying the pragmatic abilities of bilingual children).

The *Center for Cognitive Science of Language* group specializes in formal generative linguistics, especially syntax and semantics/pragmatics, and uses this as a foundation for engaging in other domains of language-related cognitive science – especially language processing, language acquisition and bilingualism.

Basic research topics recently investigated in the Center include the following:

In the context of the FP7 project 'ATHEME', which deals with various aspects of multilingualism in the individual and the society, we have collaborated with the Lyon Laboratory on Language, Brain and Cognition in an investigation of the potential advantages of early bilingualism in children in the development of pragmatic abilities for reconstructing silent language elements.

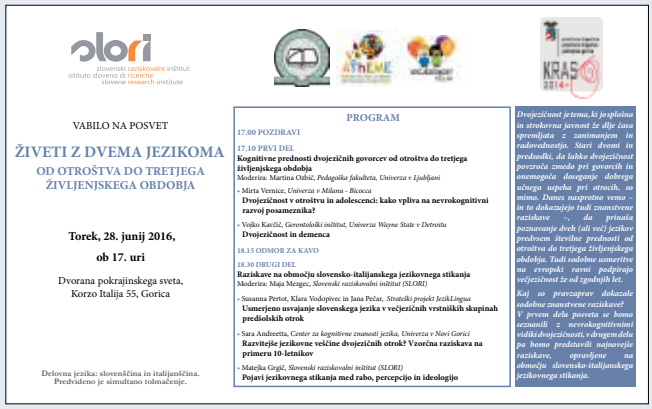
In light of conflicting data in previous literature we investigated the status of syntactic islands in Slovenian. In a magnitude-estimation study we found that despite the existence of studies suggesting the contrary, the cross-linguistically robust ban on extraction from subject NPs is also observed in Slovenian after all. We also found that unlike other Slavic languages without the definite article, Slovenian does not allow Left-Branch Extraction. One possibility for explaining this is the hypothesis that Slovenian is currently in transition from an NP language to a DP language.



We investigated the nature of language change through the lens of the expression of possibility modality. We tracked the development of the Modern-Slovenian possibility system, which had been recognized as a peculiarity among European languages. Led by certain dialects which exhibit partly divergent subsystems of possibility expression, we managed to derive the peculiar pattern with independently well-established processes of language change.

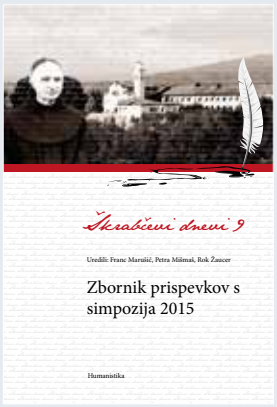
With colleagues from the University of California, San Diego, and Skidmore College we tested 2.5- to 5-year-old children to establish whether there is a correlation between number-word acquisition and the grammatical system of number. A comparison of Slovenian-speaking children from Ljubljana and Slovenska Bistrica, whose dialect has robust dual, and from Nova Gorica and Metlika, whose dialect has almost no dual, showed that the former group is faster to learn the meaning of the word 'two', suggesting that a language feature can help in the acquisition of nonlinguistic concepts.

Within the project 'Experimental Morphosyntax of South Slavic Languages', headquartered at University College London, we continued with psycholinguistic explorations of the combinatorial possibilities of the South-Slavic number and gender agreement system on the basis of which we have been reassessing and complementing the findings of traditional dialectology, which were based on lexical similarities, with comparisons of morphosyntactic systems.



Other work recently conducted in the Center includes the following:

2016 was the second year that saw us run the outreach center 'Večjezičnost velja' (http://vecjezicnost.ung.si/). This is the Slovenian branch of Bilingualism Matters, established in 2008 in Edinburgh, and targets families, teachers and anyone else who might have questions about raising bilingual children or about an adult life with more than one language. The center offers individual counseling and organizes public events with which we disseminate information and new, science-based findings about multilingualism.



Two members of the Center served as editors for a scientific monograph, published in English, with 12 generative-linguistics articles about Slovenian syntax. The very first publication of this type, this important monograph includes topics ranging from Slovenian clitics and pronouns via unaccusative verbs, the future auxiliary, and the syncrony and diachrony of modality, all the way to relative clauses, multiple *wh*-movement and the left periphery of the clause. Moreover, three members of the Center served as editors of the volume Škrabčevi dnevi 9, which compiles contributions that were presented a year earlier at the Škrabčevi dnevi 9 conference co-organized by our Center and the Research Center of the Slovenian Academy of Sciences and Arts.


UNC
SCIENTIA VINCES

Pedagogical Work

In 2016, the pedagogical work at the University of Nova Gorica was done within six schools and one graduate school: *School of Environmental Sciences, School of Engineering and Management*, *School of Science*, *School of Humanities*, *School for Viticulture and Enology*, *School of Arts*, and *Graduate School*, and at those schools, we had the following programs: Environmental Sciences, Physics, Humanities, Karstology, Economics and Techniques for the Conservation of the Architectural and Environmental Heritage, Molecular Genetics and Biotechnology, and Cognitive Science of Language.

School of Environmental Sciences

(Head: Prof. Dr. Matjaž Valant)

Excursion within a course Fundamentals of Environmental Sciences (Location: Power plant Soča)

The study program Environment, Level I is an undergraduate program to obtain a university degree. The program offers all important contents from natural sciences and technical and social subjects related to environmental issues such as pollution of water, air and soil, environmental monitoring, waste management and environmental protection, management and economics. The basic goal of the program is to educate experts that will be able to conduct work on research, technical and managerial fields related to environment. This goes for different industrial sectors, lawmaking and law executing area on a national and local levels.

Study Pogrammes:
Bachelor's Study Programme Environment (First Level)
Master's Study Programme Environment (Second Level)

School for Environmental Sciences educates in the field of research, preservation and management of environment. The university study program Environment was according to the Bologne Directives modernized in changes into study programs Environment, Level I and Environment, Level II. The I. and II. level programs received public accreditation with declaration of Directorate for Higher Education of Republic of Slovenia on date 12. 10. 2007 and 15. 2. 2008, respectively. In 2014 and 2016 we have reorganized the contents of the both study programs. Among others, we have introduced obligatory practical training for the I. level students and substitute a diploma thesis with a diploma seminar.

The School has agreed with University Ca' Foscari from Venice a double degree program – »Double-Master's Degree in Environment, Sustainable Chemistry and Technologies« that started in 2014/2015 school year. Students that decide for this possibility fulfill the student obligations at both universities, according to the agreement, and receive a diploma certificate from both universities.

In 2015/2016 school year we enrolled a ninth generation of students in the study program Environment, Level I. Beside mandatory and selective courses the students had an opportunity within their field trips, excursions and group projects to see waste landfills, experimental stations and institutes, industrial facilities, power plants and regional parks.

Laboratory work at a course Microbiology

A uniqueness of our study program Environment Level I is a course called Group project, which introduces a modern approaches to education through project work. Emphasizes are on solving practical problems related to environment and working in a multidisciplinary group. Within such project a great achievement has been accomplished by students Bizjak Tine, Česnik Urban, Gajšt Tamara, Grivec Tjaša and Pipan Urša that have been working on their project in 2013-2015. In 2016 they publish a scientific journal in Marine Pollution Bulletin about microplastic in Slovenian sea. The research was conducted under supervision of doc. dr. Andreja Kržana and Andreje Palatinus, univ. dipl. ecol. During 20 months they were sampling see surface on 17 transects. They found a high average concentration of microplastics, 406.000 particles/km^2, which temporarily and locally strongly varies.

On the study program Environment Level I we have graduated 13 students in 2016. For study achievements we awarded students Tine Bizjak with Alumnus Optimus and Sandra Dukić with Alumnus Primus.

The study program Environment, Level II takes four semesters to complete and is exceptionally interdisciplinary. It offers courses from all important fields of environmental sciences but also enables students to deepen their knowledge in their fields of interest by choosing from a large selection of the selective courses. On the Level II the project work is performed individually within a course Individual project. In 2015/2016 school year we enrolled 14 students in the 1. year study. In 2016 one has received the master thesis.

The School has been actively involved in international exchange of students and professors, which has mainly been organized within Erasmus program. Within this exchange two our students has travelled to perform practical work and study in Finland and two professors to France and Germany. We accepted four students from Latvia, Turkey and Romania.

Field work at a course Biomonitoring (sampling of micro-invertebrates on Vipava river)

School of Engineering and Management

(Dean: Prof. Dr. Tanja Urbančič)

Study Programmes:
Bachelor's Study Programme Engineering and Management (First Level)
Master's Study Programme Engineering and Management (Second Level)

Batchelor's and Master's Programme of Engineering and Management are pursued at the School of Engineering and Management. Graduates there are educated to identify and solve problems of economically efficient and sustainable business and industry based on their knowledge of technology, economy and management. Relations with companies, various institutions and local community are crucial for the school. These relations enable exposure of students to realistic problems within academic curricula and provide conditions for high employability of programmes' graduates. The school with enrolled students from ten different countries possesses increasingly international atmosphere. Students of the School of Engineering and Management are awarded repeatedly in student competitions organised by various companies and professional societies.

The tenth generation was enrolled to the Batchelors programme and the eleventh generation to the Master's programme at the School of Engineering and Management in year 2016. The Batchelor's programme in English language is started in parallel to Slovene language programme in the same year.

103 students were enrolled in academic year 2015/2016, out of which 66 students in the Batchelor's programme and 37 students in the Master's programme. More new students from Slovenia and abroad enrolled than in the previous year.

The curriculum of the Batchelor's programme has been modernised. The new programme has more elective courses, updated content and more emphasys on information technologies due to trends of digitalisation in business and industrial companies. The Master's programme has also been modernised in a similar manner.

The programe has until present always been implemented completely. Students selected Batchelor's elective courses *Enterpreneurship Seminar*, *Logistics*, *Sociology of Organisation and Business Communication*, and *Computer Aided Design*, as well as Master's elective courses *Robotics*, *Open Source Information Systems*, *Automatic Control Systems*, *Knowledge Management*, *Business English* and *Industrial Design* in the previous year. Students of Industrial Design course headed by their professor Oskar Kogoj and assistant Tone Kancilja publicly exhibited their projects in the lobby of Lanthieri Mansion, Vipava in June 2016.

The School of Engineering and Management is very active in the development and introduction of new methods and information technology support for teaching. This, together with the introduction of e-learning elements contributes to the better quality and availability of courses. The School of Engineering and Management participated in the consortium of the three-year project entitled FETCH (Future Education and Training in Computing: How to support learning at anytime anywhere) in the framework of the EC Lifelong Learning programme. The project ended in 2016. Moodle software is used in increasing number of courses at the School. Consequently the study activities are mitigated for those students that are active athleets or part-time employed and need flexibility in their study curiculum. A series of lectures from selected courses has been video taped in cooperation with Josef Stefan Institute, subtitled in Slovene and English language and made available to students to facilitate their study for exams.

28 students successfully finished their study at the School of Engineering and Management in year 2016. 16 staff members were active as their supervisors. 7 graduates come from the Batchelor's programme Economics and management of production and technological systems, 7 from the Batchelor's programme Engineering and Management, first level, and 13 from the Master's programme Engineering and Management, second level. Cummulative number of the graduates of this school increased to 495 at the end of the year 2016. Their broad profile ensures an excellent employability rate. Taking into account the last three generations of graduates, the enokyability in 6 months after graduation is 83,84 %, while in one year after graduation it comes to 91,83 %. High employability is obtained by maintaining good cooperation between the school and companies, mostly by student internships in companies. In the year 2016, students were accepted by the companies Mahle d.o.o., GEN-I d.o.o., Nestle Adriatic Slovenija d.o.o., KaTe Nova Gorica, Intra Lighting d.o.o. in Rut d.o.o. for their internships. The school also collaborates with Primorska Technology Park, Regional Developmental Agency of Northern Primorska and Technology Park Ljubljana in encouraging and preparing the students for enterpreneurship.

Sucessful and varied work of the school graduates was presented at the round table taking place on the first day of the academic year with new students in the audience and the recording of the event made publically available through the university YouTube channel. Wider audience was also informed about the success of a team of students winning the student challenge organised by the Iskra comany where our students were the best among 13 competing student teams from the whole country. At the challenge devoted to smart and energy-efficient buildings, they presented their project on centralised measurements in the district heating system, which was developed under the supervision of doc. dr. Henry Gjerkeš.

School of Science

(Dean: Prof. Dr. Samo Stanič)

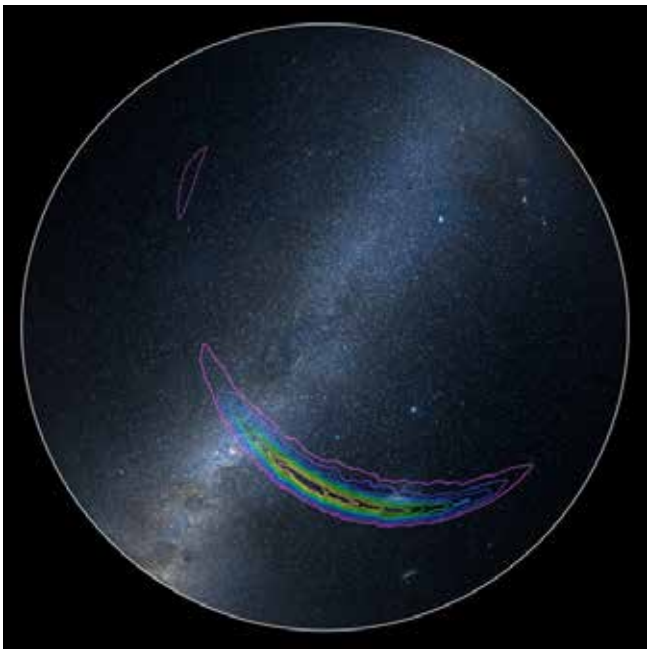
Researchers Night, 30 Sep 2016, Nova Gorica.

Study programmes:
Bachelor's Study Programme Physics and astrophysics (First Level)
Master's Study Programme Physics and astrophysics (Second Level)

Physics addresses the phenomena in nature at its most fundamental levels on a variety of dimensional and energy scales. The goals of physics are to build on the current understanding of nature, using both experimentation and theoretical analysis, and to extend our understanding to more complicated systems, such as molecules, fluids, solids and galaxies. School of Science, supported by six research laboratories and centers of the University of Nova Gorica, provides research oriented programs »Bachelor in Physics and Astrophysics« and »Master in Physics and Astrophysics«. We actively promote student creativity, originality and adaptability; we consider the study to be the competitive edge that may help our alumni in their professional careers. Our advantages are individual approach to students, international research experience, and a young, dynamic academic team.

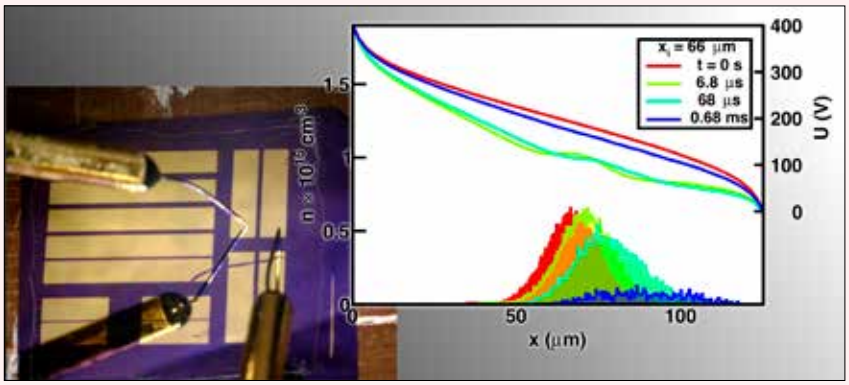
We welcome foreign students, as all our lectures and other teaching activities are available in English. Pursuing Bachelor and Master studies in physics and astrophysics requires no tuition for students from Slovenia, other EU member states, and countries signatories of bilateral agreements that waive tuitions in higher education (Serbia, Montenegro, Macedonia, Bosnia and Herzegovina and others). The school's involvement in the ERASMUS+ program provides a convenient possibility for students from Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine to pursue physics studies at the University of Nova Gorica. Our study programs are accredited by the Slovenian Quality Assurance Agency for Higher Education and our graduates obtain officially recognized academic degrees and diplomas, including the diploma supplement, prepared according to standards agreed to by the European Commission, the Council of Europe and UNESCO.

To provide high quality education and optimal conditions for either further studies or employment, the bachelor level program introduces general theoretical and experimental topics in a broad spectrum of physics fields, and gradually involves the students in actual research. The master level program aims at profiling the students into narrower research fields, such as astrophysics and physics of materials, providing additional in-depth knowledge each of the modules. The students are also encouraged to become involved in international research collaborations and student exchanges with other universities and institutions through the ERASMUS and other programs. The common point of both programs is scientific excellence, student research within international collaborations, direct individual approach in teaching and research and collegial relations between students.



Part of the sky from which gravitational waves were directly detected for the first time by the LIGO observatory.

School of Science is also active in dissemination activities promoting science among the youth. It co-organizes Slovenian high-school and elementary school level competitions in astronomy, provides support to the national team at international competitions, is involved in managing the Slovenian version of the popular science "Portal to the Universe" and organizes public lectures. Our students are welcome to participate. The service they give is very rewarding, as they obtain invaluable experience with giving lectures and presenting scientific ideas to general public.



Position dependence of electric potential and density of photogenerated charge carriers in organic semiconductor between coplanar electrodes. Each curve represents the results of Monte Carlo simulation using different time delay from the carriers photogeneration. The background represents a photo of the measurement of the time-dependence of photogenerated current.

Bachelor program »Physics and astrophysics«

The duration of the bachelor program »Physics and astrophysics« (Bologna 1st level) is three years and the curriculum provides a total of 180 ECTS points. The courses aim to provide all the general theoretical and experimental knowledge in a broad spectrum of physics fields, required for research work, and to gradually involve the students in actual research. Theoretical courses are in all years complemented with corresponding research activities, taking place in the six research laboratories and centers of the University of Nova Gorica. The graduates can deepen the knowledge obtained by focusing on narrower fields of physics either by pursuing master studies at the University of Nova Gorica or at other universities in Slovenia and abroad. Although the general orientation of the program is towards astrophysics and solid state physics, in nevertheless provides a broad enough base of knowledge for the graduates to be able to pursue further studies or employment in any field of physics.

Master program »Physics and astrophysics«

Master studies of »Physics and astrophysics« (Bologna 2nd level) provide specialist knowledge in the fields of astrophysics and solid state physics. The program's duration is two years it provides a total of 120 ECTS points. Student activities within research laboratories and centers of the University of Nova Gorica are even more pronounced that at the bachelor level. They are the basis for their master theses, which are often published in international scientific journals. We believe that working experience in international environment and with state-of-the-art technologies increases the competitiveness of our graduates in their further careers.

School of Humanities

(Dean: Doc. Dr. Aleš Vaupotič)

Study programmes:
Bachelor's Study Programme Slovene Studies (First Level)
Bachelor's Study Programme Cultural history (First Level)
(Programme directress: Prof. Dr. Petra Svoljšak)

Master's Study Programme Slovene Studies (Second Level)
Pedagogical Master in Slovene Studies (Second Level)
European Master in Migration and Intercultural Relations (Second Level)
(Programme directress: Prof. Dr. Marina Lukšič Hacin)

We follow the motto: "We link humanistic tradition and modern knowledge with the future in mind," at the School of Humanities. In collaboration with the Research Centre for Humanities and the Center for Cognitive Science of language and multiple partners we link top scientific research work with teaching; this way we introduce students into research and professional practice. In 2016/2017 we conduct Pedagogical Master in Slovene Studies (second level) for the first time. We have also prepared programs in the field of digital humanities, which will be implemented in the coming study year. We have been a partner in the implementation of the international study programme European Master in Migration and Intercultural Relations (Erasmus Mundus) for several years.

At the School of Humanities we offer programmes of first and second level. We enable the students of these programs to continue their studies at the University of Nova Gorica on the third level at the Graduate School, on the programs Humanities and Cognitive Science of Language.

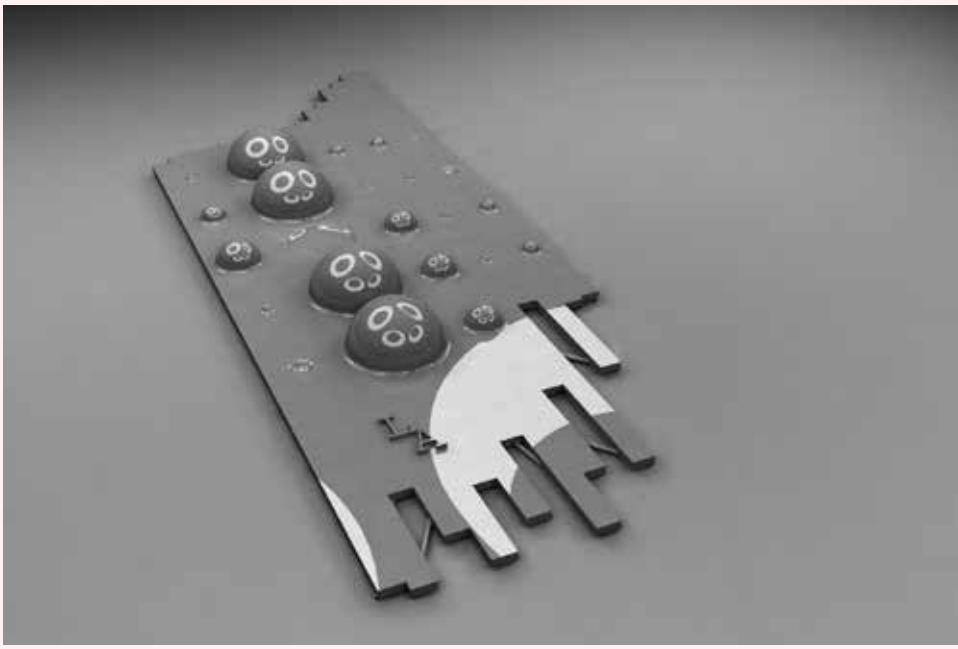
Bachelor's study programmes (first level) are Slovene Studies and Cultural History. Study fields of Slovene Studies are linguistics, literary theory and history, the qualification title that the student acquires, is a degree in Slovene Studies (UN). We upgrade the traditional division into linguistic and literary contents with introducing the basic and elective subjects in the field of general linguistics and literary theory.

The study area of the programme of Cultural History are historical sciences, it enables the students to obtain a broad fundamental knowledge, additional attention is devoted to the specifics of the cultural and political environment in which the programme was created. The student acquires the professional title of graduate historian (UN). The director of the programme of Cultural History is prof. dr. Petra Svoljšak.

Programs of second level at the School of Humanities are Master of Slovene Studies - the direction of Linguistics and Literary Science -, from 2016 the new programme Pedagogical Master in Slovene Studies and international programme European Master in Migration and Intercultural Relations (Erasmus Mundus). Master of Slovene Studies (second level) introduces to all students knowledge of the Slovenian language and Slovenian literature as well as theoretical and methodological basis of

literary science and linguistics. Study direction of Linguistics enables to obtain extensive fundamental knowledge in the field of the study of language, structural-theoretic, applied and interdisciplinary linguistics and other related humanistic and social sciences. Literary Studies enable to obtain a comprehensive insight into the Slovenian literature with the stressed comparative approach to the literary science. The acquired title in both programmes is Master of Slovene Studies.

Since 2016/2017 Pedagogical Master in Slovene Studies (second level) has been running. It links educational sciences and education of teachers, literary and linguistic sciences in the same proportion. The acquired qualification title is the Professor of Slovene Studies. The graduates are able to carry out the teaching process at the subject of Slovenian language in primary and secondary schools, teach Slovene as a second or foreign language, and deal with the complex issues of the Slovenian language and literature after their graduate.



Migrations and Intercultural Relations is an international programme that focuses on human rights, democratic values, the welfare state, the labor market and the challenges with which the Member States of the European Union as well as a global world have been facing. It is running with the support of the elite programme for international cooperation and exchange of students and teachers in higher education, Erasmus Mundus. Study areas: migration studies, history, political science, sociology, anthropology, education; Qualification title: Master of Arts in Migration and Intercultural Relations. Study is running at several universities in English language. Director of the programme is prof. dr. Marina Lukšič Hacin.

The application for accreditation of interdisciplinary master's study programme of Digital Humanities, which covers fields of humanities, computing, multimedia design (in proportions of 40, 40, 20 percent) was submitted in 2016. School of Humanities is also running courses of different languages, both foreign languages and Slovenian language.

School of Humanities participated in the organization of several events. Among the most prominent are three of them. The discussion Living with two languages, from childhood to third age, on June 28th 2016, Hall of the Provincial Council, Gorizia. The symposium Cultural opposition in socialistic Yugoslavia, which took place on October 3th in the premises of the School of Humanities. The discussion Izidor Cankar: master of well twisted phrases, on October 6th in the Cultural center Lojze Bratuž, Gorizia.

School for Viticulture and Enology

(Dean: Prof. Dr. Branka Mozetič Vodopivec)

Study programme:
Bachelor's Study Programme Viticulture and Enology (First Level)

The School of Viticulture and Enology is offering practically oriented BSc study program Viticulture and Enology, an unique interdisciplinary program in Slovenia, that integrates grape-growing, winemaking and wine marketing and is consistent with the guidelines and recommendations of the OIV for the education of Oenologists. Our lecturers are excellent experts with multidisciplinary practical and research experiences. The School for Viticulture and Enology is located in the center of vine-growing area; therefore constant integration with practical knowledge is enabled to the students and researchers. Students can gain their practical skils on our University estate as well as with respected winemakers of the local and wider area, and are also included in the ongoing university Wine Research Center projects.

School of Viticulture and Enology (SVV) offers bachelor study program "Viticulture and Enology". In academic year 2015/2016 the eleventh generation of students has been enroled. In this study year student *Daniela Markovic* finished studies. Earlier in 2016, the SVV and UNG Senates gave their consents to the accreditation of master study program Viticulture and Enology and at the end of 2016 procedures for transforming of SVV to the Faculty faculty for enology and viticulture began, which will take place in 2017, together with the national accreditation of the MSc study program.

The BSc program of Viticulture and Enology was carried out in accordance with the accredited curriculum. In the third year of studies 8 elective courses have been offered to the students. The program was carried out predominantly in Vipava Lanthieri Mansion. Part of practical training and field teaching was done also in the University estate in Manče, where a new 1.2 ha vineyard has been planted in 2015 (*Zelen* and *Pinela* cultivars). Practical training is an important part of our study curriculum and the students can do it also on our partner estates, in cellars, wineries and wine labs as well with visits, organized as field trips to important vine-growers and winemakers in the Primorska wine region, as well as in other Slovenian and Italian transborder wine-growing regions. Students learn about winemakers and their wines also with guided visits of Slovenian wine festivals. Special attention is given to companies that are indirectly connected with winemaking: barrel productions, winemaking/vinegrowing equipment producers, bottle corks manufacturing, wine bottles production, consulting firms, sales companies, marketing agencies and nurseries.

The school gives lots of emphasis on wine marketing and promotion knowledge and practical skills. Also this year our students were involved in local wine festivals presentations with the university wine (*Univerzitetni Zelen, Univerzitetno rdeče, Rektorjev izbor*) and study program promotion as well (*Festival of wine in Šempas*, *Festival of Zelen*, *Wine root in Rovih pod starim Kranjem*). At the end of November 2016 a group of our 2nd year students visited Slovenian Wine Festival in Ljubljana in which they also also participated actively as wine presenters under the frame of 2016 Lidl young winemaker competition. Last Thursday in May we have organised our annual, open to public, Student Wine Festival again. The visitors choose our student *Fornazarič Jani* to be the best presenter among other students, followed by his colleagues *Nejc Špacapan* and *Karlo Kopjar*.

Together with other UNG Faculties and Schools we have presented ourselves to potential students on national educational fair Informativa 2016 and at the end of August again in international Agro-Food Fair in Gornja Radgona (AGRA 2016) as well.

Building of social network is important for our School and we do that with the help of our Facebook page, which takes care of constant update of School friends and younger generation with interesting information about us, our students and our events. The recognition of our School at the national and international levels is greatly enhanced by scientific and professional contributions of Wine Research Centre members, and also with school promotional acitivities on national and international level with great support of our students.

School employees constantly upgrade their professional and scientifical knowledge by training/teaching stays abroad and we gladly accept foreign experts to our teaching process, which gives certain width to our program. In 2016 we guested Dr. Igor Chicuic from Moldova (Infinity-Erasmus Mundus program). We support every student exchange, therefore we again gladly accepted 7 new students from Lycee Bel Air (France) in the second semester 2015/2016 for an study exchange.

At the end of 2016 UNG officialy took over newly renovated economical part of Lanthieri Mansion in Vipava, in which we plan (in 2017/2018) to upgrade existing laboratory and lecturing facilities of School of Viticulture and Enology in a residential part of the Lanthieri Mansion.

School of Arts

(Dean: Prof. Boštjan Potokar)

Film workshop

Study programmes:
Bachelor's Study Programme Digital Arts and Practices (First Level)
(Programme directress: Prof. Rene Rusjan)
Master's Study Programme Media Arts and Practices (Second Level)
(Programme directress: Prof. Rene Rusjan)

University of Nova Gorica School of Arts has been educating in the field of arts since 2009. Within the University it started functioning as a BA school and in seven years developed into a fully accredited Academy. This is the first university level academy accredited in Slovenia in 71 years. In English it retains the naming as the *School* of Arts. BA and MA programmes cover the following fields:

- Animation *(animated film, animation in creative industries)*
- Film *(fiction, documentary, experimental film, art video)*
- Photography *(author, functional)*
- New Media *(creative use of new technologies)*
- Scenographic Spaces (film, *theatre scenography)*
- Contemporary Art Practices *(combination of different media)*

After 2008, when we prepared the first study programme in the field of Arts, the school saw a gradual but firm development into an art academy:

- March 2011 - The Slovenian Quality Assurance Agency (SQAA) accredits the UNG School of Arts with decision no. 6033-86/2009/8.
- September 2012 - SQAA accredits the Bachelor's programme in Digital Arts and Practices with decision no. 6033-97/2001/19.
- September 2014 - SQAA accredits the Master's programme in Media Arts and Practices with decision no. 6033-117/2013/20.
- September 2016 - the School is awarded accredidation as an Academy by the SQAA in decision no. 6032-11/2015/19. In English it retains the naming as the *School* of Arts.
- October 2016 - the University of Nova Gorica School of Arts, is written into the List of Accredited Slovenian Higher Education Institutions with the new Slovenian name Akademija umetnosti Univerze v Novi Gorici with decision no. 6033-475/2016/8 at the Ministry of Education, Science and Sport.

The Programme structure at the UNG School of Arts enables combining media and fields thereby opening a range of professional pathways, from becoming an author to developing a distinct professional identity. In 2009 we opened the Bachelor's programme in Digital Arts and Practices. Our MA programme was developed within the ADRIART EU supported project, together with partners from Croatia, Austria and Italy. As leading partner of the ADRIART project at the UNG School of Arts we were able to offer continuing education for our BA graduates an MA programme in in 2012/13 - Media Arts and Practices, with a pilot run in that year and a full

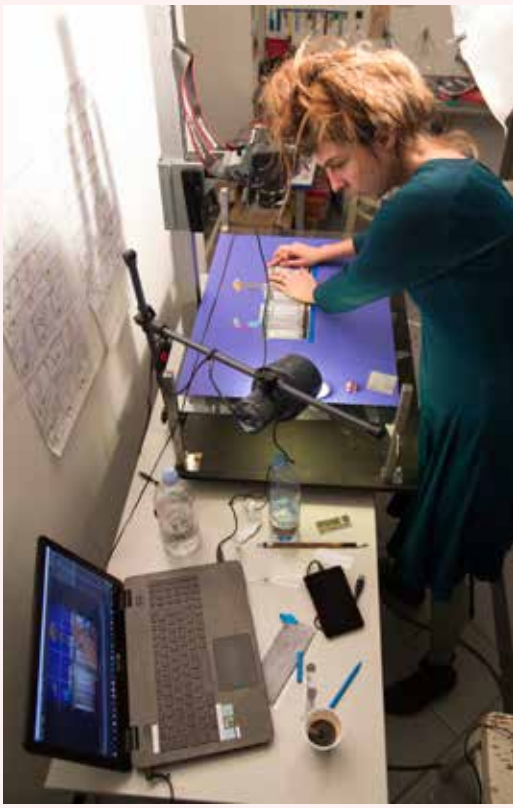
UNG School of Arts student presenting her work at Pixxelpoint 2016 festival

launch the following year. In 2013/14 also the Croatian partner, the University of Rijeka Academy of Applied Arts, started the same programme.

In the 2016/17 study year 54 students are immatriculated at the UNG School of Arts. The students structure is international with some Italian and Croatian students already on BA level. The MA level is distinctly international as more than half of the students are foreigners. Several are from EU countries while some come from more distant parts of the world. The entire educational activity of UNG School of Arts is held at the premises of the Palazzo Alvarez in the center of Gorizia, Italy. The school occupies in total 800m2 intended exclusively for educational activities and additional 200m2 service spaces. Through various projects and co-production activities we have in recent years been able to acquire the much needed equipment for film, animation and photography production and postproduction. Students thus now have a modern studio environment where they can work throughout the day.

In addition to individual careers of mentors and other UNG School of Arts collaborators, all of whom are nationally and internationally renowned artists, a lot of energy is invested in cooperations with various festivals and other ways of presenting student work.

- At the 19th edition of the Festival of Slovenian Film a student of the UNG School of Arts received a special mention by the Jury for her graduate film "*Srdohrd*" in the student film section;
- At the same festival in Portorož s graduate of the UNG School of Arts received the main award for her debut film "*Bon Appétit, La Vie!*" in the short film section;
- In Ljutomer the 12th Grossman Festival jury gave the best musc documentary award to our student for her graduate film "*Rejects of the second generation – Following the Traces of Punk*";
- At the 15th Cinedays Festival of European Film in Skopje our MA student received the main award in the student section for her film "*Scarecrow Cross*";
- At the 8th International Festival of New Media Culture Speculum Artium in Trbovlje students have participated for the second time in a row in a group exhibition of new media and contemporary art projects and presented a selection of animated and ficition films.
- Our collaboration Cinemasports Universities festival in Taiwan are very successfully participated for the third year. This year, three student films were in the selection while one of them was awarded the grand prize.
- The School of Arts students have participated for several years in a row at the Pixxelpoint festival. The contemporary art practices festival was this year curated by the school's Program Director and Professor of Contemporary Art, Rene Rusjan, who specifically connected the festival with the whole University of Nova Gorica. In a number of workshops with artists and scientists many BA and MA students were involved, while some master students' works were featured at the festival, equally with other artists.



Animation workshop

We believe our most important showcase are our students and graduates – their products are valued high enough by professionals to represent Slovenia at diverse exhibitions, festivals and selections around the globe.

Graduate School

(Dean: Prof. Dr. Iztok Arčon)

Study Programmes:
Doctoral Study Programme Environmental Sciences (Third Level)
(Programme director: Prof. Dr. Anton Brancelj)
Doctoral Study Programme Karstology (Third Level)
(Programme director: Prof. Dr. Martin Knez)
Doctoral Study Programme Physics (Third Level)
(Programme directress: Doc. Dr. Sandra Gardonio)
Doctoral Study Programme Humanities (Third Level)
(Programme directress: Doc. Dr. Ana Toroš)
Doctoral Study Programme Economics and Techniques for the Conservation of the Architectural and Environmental Heritage (Third Level)
(Programme directress: Prof. Dr. Saša Dobričič)
Doctoral Study Programme Molecular Genetics and Biotechnology graduate study programme (Third Level)
(Programme directress: Prof. Dr. Elsa Fabbretti)
Doctoral Study Programme Cognitive Science of Language (Third Level)
(Programme director: Prof. Dr. Artur Stepanov)

Graduate School hosts and carries out all UNG's doctoral study programmes (third level), regardless of their scientific discipline. In 2015/2016 it offered seven doctoral programmes: *Environmental Sciences, Karstology, Physics, Humanities, Economics and Techniques for the Conservation of the Architectural and Environmental Heritage, Molecular Genetics and Biotechnology, Cognitive Science of Language*. All study programmes are internationally orientated and closely linked to UNG's research laboratories and centres, and to other research institutions in Slovenia and abroad, which enables graduate students to conduct their research work required by their studies and to participate in international research activities and projects.

Graduate School hosts and carries out all UNG's doctoral study programmes (third level), regardless of their scientific discipline. Such a closely knit and homogeneous organization of graduate school proved to be very effective, enabling high electiveness and interdisciplinarity in designing individual doctoral study programmes. Students are also allowed to perform part of their study obligations in related study programmes at other universities in Slovenia and abroad, which encourages the mobility of students. In this way, each student's programme can be designed on an individual basis.

In 2015/2016 Graduate school offered seven doctoral programmes: *Environmental Sciences, Karstology, Physics, Humanities, Economics and Techniques for the Conservation of the Architectural and Environmental Heritage (ETCAEH), Molecular Genetics and Biotechnology, Cognitive Science of Language*. All study programmes are internationally oriented and closely linked to UNG's research units, and to other research institutions in Slovenia and abroad, where graduate students can conduct their research work required and can participate in international research projects. Among many external partners we should point out those with which we have established long term collaborations. The programme Karstology is carried out in close association with the Karst Research Institute of the Centre for Scientific Research of the Slovene Academy of Sciences and Arts. The links between the two institutions were further strengthened in 2014 with the establishment of the UNESCO Chair on Karst Education at UNG. Doctoral programme ETCAEH, which includes a one-year specialization (second-level Master) programme, is implemented in close cooperation with Università IUAV di Venezia. Doctoral programme Molecular Genetics and Biotechnology is carried out in collaboration with the International Centre for Genetic Engineering and Biotechnology (ICGEB) from Trieste, Italy.

The interest in the doctoral programmes is high. In 2015/2016 there were a total of 75 students enrolled in all doctoral programmes, of which more than half (53%) were foreign students. The proportion of foreign students is still increasing and reached 57% in 2016/2017. Number of international student exchanges and number of foreign visiting professors is also very high. Internationalisation of doctoral studies remains one of the central strategic directions of graduate school also in the future.

Implementation of doctoral study programmes is financed through tuition fees. Premises and equipment for the implementation of graduate study programmes are adequate. Director with Scientific Board of the programme is the expert head of an individual programme. All programmes are conducted successfully, in a high-quality manner and effectively, which is visible in the success of students in their studies and individual research work. Average grades of students are generally very high, students pass exams on their first attempt. The average duration of studies is relatively short. In 2015/2016, UNG promoted 22 doctors of science. The committee for the assessment of doctoral dissertation always includes at least one member from a foreign university to assure that the quality of doctoral degrees is comparable to international standards.

The quality of graduate studies is reflected in successful defences of high-quality doctoral theses, and in numerous publications of student research results in reputable international scientific journals: 52 scientific and professional articles, 124 papers at conferences, 44 published proceedings from conferences, and 20 other scientific publications in the academic year of 2015/16. This number does not include the publications of students who published papers, related to their research within the doctoral study after completion of study. The quality and topicality of the contents and teaching methods, provided in our doctoral study programmes was recognised also in external evaluations of study programs by the Slovenian Quality Assurance Agency and in the Institutional Evaluation of UNG by the European University Association.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Other Activities

For the researchers, students, and general public, all the professional (research) and study literature is available at the very modern *University Library*, while the *Publisher of UNG* is in charge of the publication of text books, lecture notes, collections of scientific papers and other works. The university also has a *Student Office* that helps both undergraduate and graduate students, as well as all those interested in obtaining information about the study at the UNG. The *International Office* is there for coordinating international projects, and the *Project Office* gives administrative support for carrying out international projects. Apart from that, the University of Nova Gorica also has a *Career Center* that creates a link between the university, the students and potential employers. Lastly, there the *Alumni Club* that joins alumni from all generations of graduates, of both graduate and undergraduate programs. It basically connects all individuals who have contributed in any way to the development of the University of Nova Gorica.

University Library

(Head: Vanesa Valentinčič Murovec)

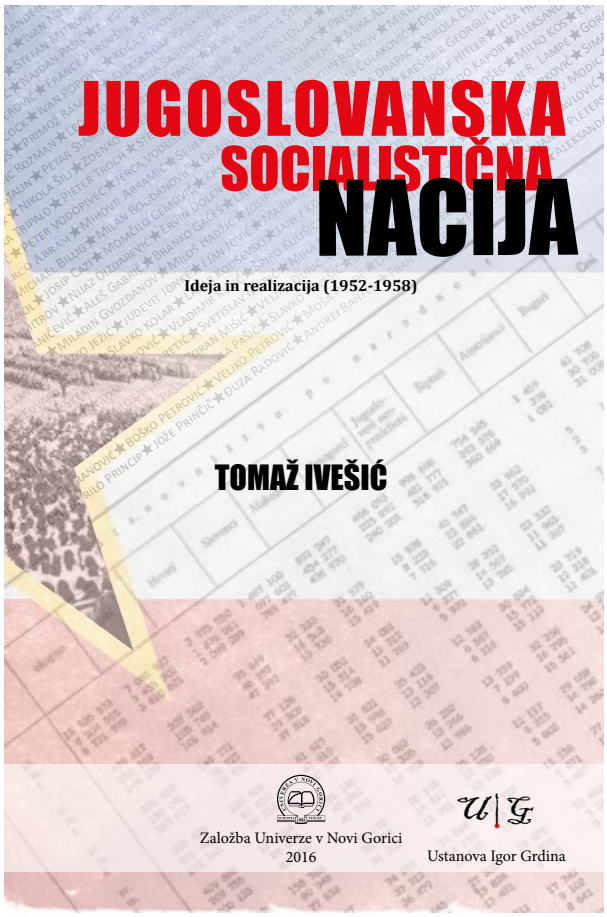
Library collection is almost completely open access and organized by UDC classification. We offer on-line searches from databases and through interlibrary loan we provide material that is not in our collection. We provide bibliographic service for our researchers. The library is full member of the Slovene library co-operative online bibliographic system & service, COBISS. Throug our website we offer e-learning of search skills we also provide information literacy courses. The library is open 48 hours a week. Users can use a reading room with 50 reading places, and computer room with 8 computers, and there is option to connect your own computer for easier access to electronic materials, archives and databases. From 2016 the UNG researchers started to submit their works into Repository of the University of Nova Gorica, RUNG one of the Open Science Slovenia portal "openaccess.si" partners. Book collection was enriched by the gifts of individuals and other libraries.

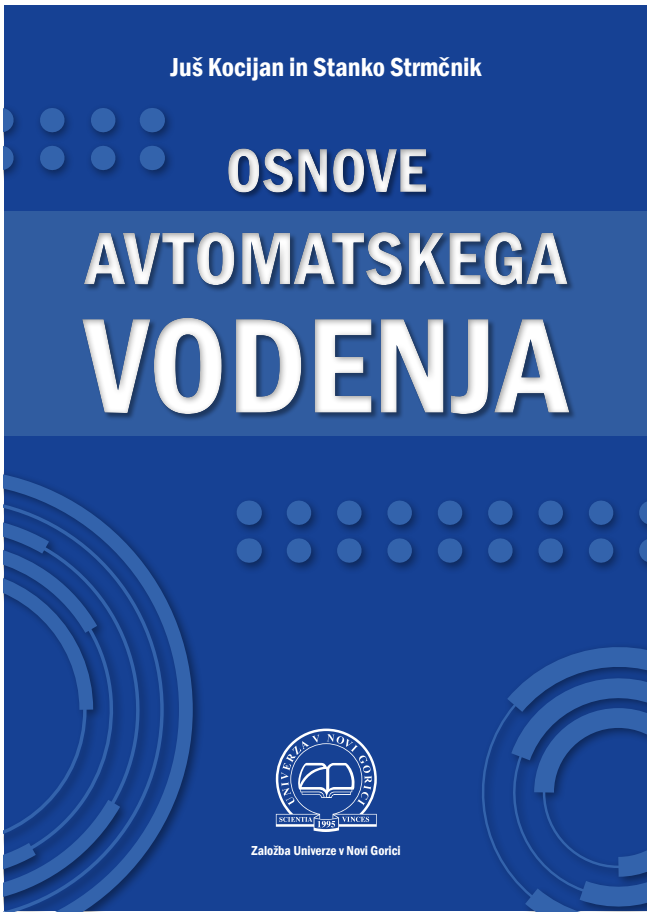
University library of University of Nova Gorica is open to all students and staff, as well as to all other visitors who are interested in the materials offered by the library. We collect material from all areas of science, mostly for educational and research activities of UNG.

Library collection includes more than 19.500 book titles, 90 titles of periodicals, 550 items of non-book materials and e-edition of scientific journals, reachable over services like ScienceDirect, Springer Link, APS Journals, EIFL Direct, ACS Publications, JSTOR. Our users can access databases such as Web of Science, CAB Direct, Food Science and Technology Abstracts (FSTA), MathSciNet itn.

Publisher of UNG

(Head: Mirjana Frelih)





University of Nova Gorica started its publishing activity in 2001. We publish textbooks and study materials for the academic courses available at our institution, as well as research and scientific works. Publishing is regulated by the Rules of publishing activities, for quality is responsible Commission for publishing.

So far, we have published 36 publications. Among them there are teaching materials with instructions for exercises for undergraduate students of the University of Nova Gorica, university textbooks for students and professors, conference proceedings, scientific and other monographs. In 2016 we published »Zbornik prispevkov s simpozija Škrabčevi dnevi 2015« in electronic form under the Creative Commons license. In printed form we published two university textbooks: reprint »Kemijsko računanje: zbirka nalog z rešitvami za študente Okolja in drugih naravoslovnih programov« by Urh Černigoj and Mojca Bavcon Kralj and textbook »Osnove avtomatskega vodenja« by Juš Kocijan and Stanko Strmčnik. We also published a monograph »Jugoslovanska socialistična nacija: ideja in realizacija (1952-1958) by Tomaž Ivešić«.

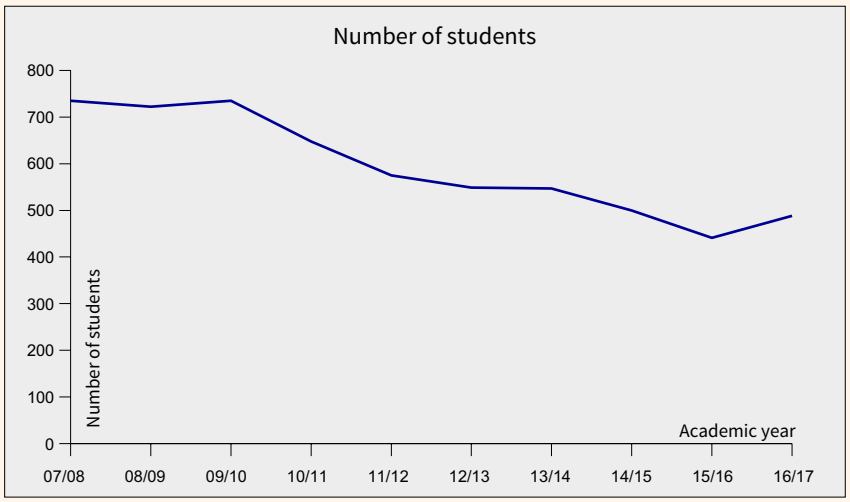
Student Office

(Head: Renata Kop)

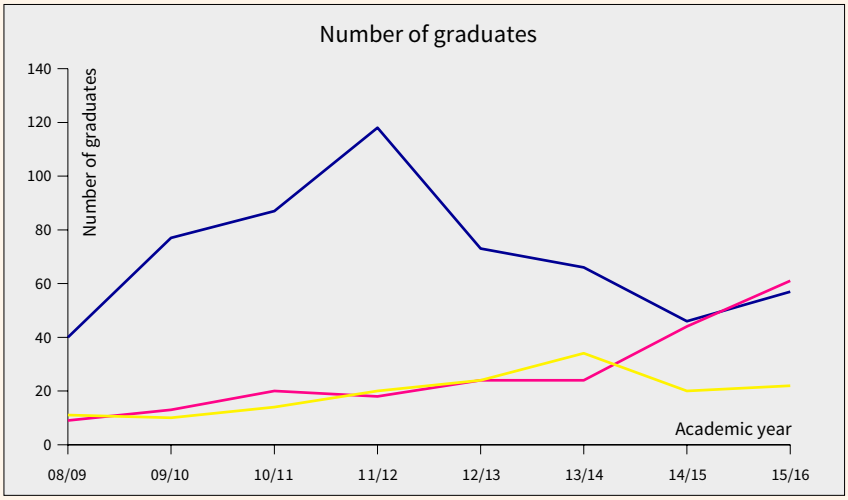
Student Office of Univesity of Nova Gorica was founded in year 2002 and serves both undergraduate and postgraduate students as well as those interested in information about the studies at our institution. The objective of the Student Office is to support students and candidates for study in academic and extra-curricular activities. The Student Office has an office available in Nova Gorica and in Vipava. Part of the Student Office is also Higher Education Application-Information Service, which was founded in year 2007.

Student Office offers information about enrolment, conditions for enrolment, informations about academic programmes, and other information concerning studies at Univesity of Nova Gorica; arranges application and selection procedures and organizes and implements call for enrolment, application and enrolment processes; issues certificates and prepares diploma papers; manages and regulates student databases; processes and analyzes students data; assists in finding accommodation; manages the processes and prepares decisions of recognition of education for the purpose of access to education.

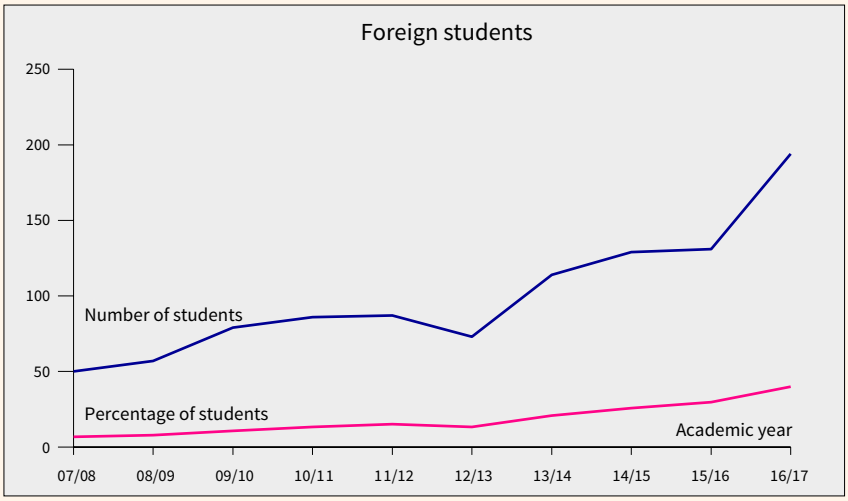
In the academic year 2016/2017 we enrolled 488 students, 278 students on first level study programmes, 131 students on second level study programmes and 79 students on third level study programmes.
The number of students falls slightly, which coincides with generation decreasing.



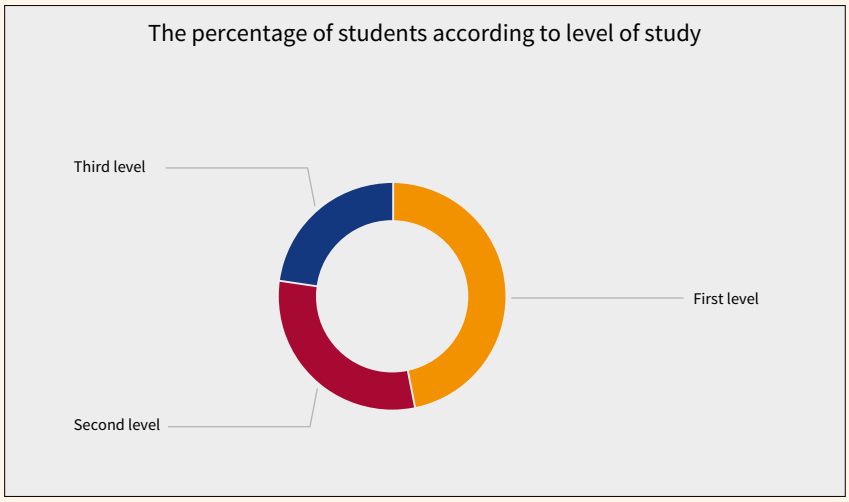
Number of graduates by level of programme in academic year 2015/2016:
- 57 on bachelor´s study programmes,
- 61 on master´s study programmes,
- 22 on doctorate´s study programmes.



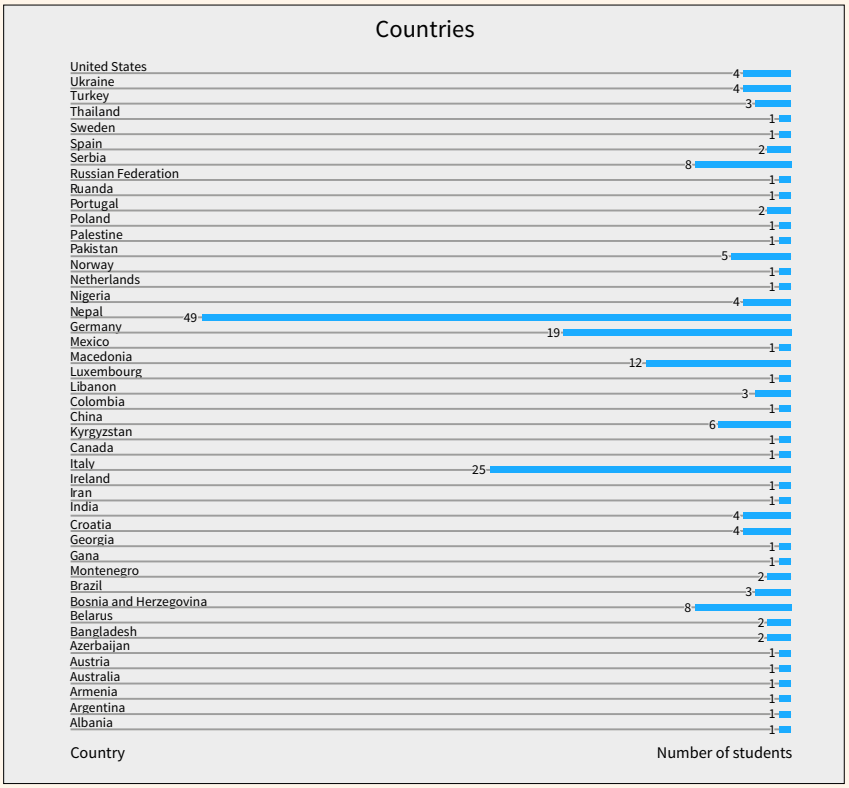
The number of foreign students in academic year 2016/2017 increased compared to academic year 2015/2016.



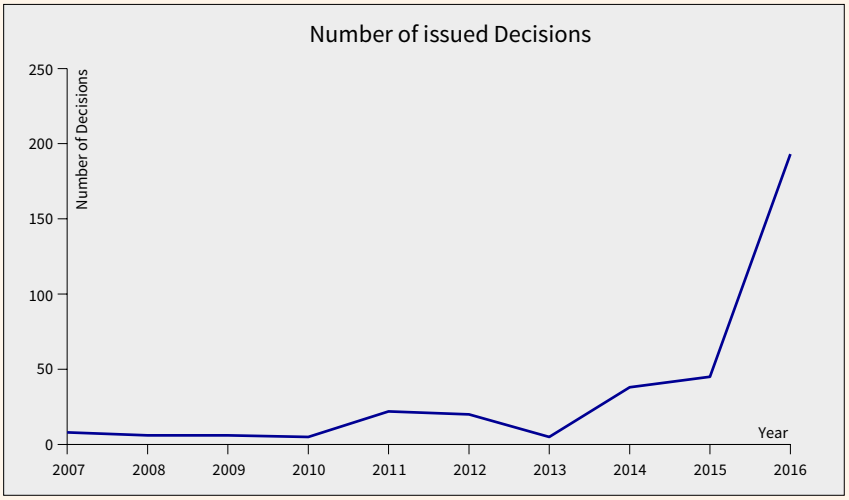
The majority of foreign students in academic year 2016/2017 study on bachelor´s (first level) study programmes, in particular on Bachelor's study programme Engineering and Management (first level).



In academic year 2016/2017 foreign students come from 44 different countries:



The Student Office completed 193 processes of recognition of education for the purpose of access to education and issued 144 positive decisions in year 2016.



Project Office

(Head: Aljaž Rener)

Project office of UNG is providing administrative support of international research project's implementation. It involves two fully employed people (head of project office and project coordinator).

The Office ensures support to the researcher and other emplyees also in the process of project proposal preparation and application. The support is focused on financial, administrative and legal aspects of proposal applications. The Office is monitoring relevant open calls and is frequently informing UNG staff about funding possibilities.

Work in the office in 2016 was focused on finalizing projects from financial period 2007-2013 on one hand and supporting applications of proposals to the calls of the financial period 2014-2020 on the other hand.

In 2016 we have participated in or guided the preparation of project budgets for more than 30 project proposals, mainly within Horizon 2020 Programme.

From the beginning of the year until mid April we were involved in finalising the project "Upgrade of the system of ensuring quality and renovation of study programme scheme at University of Nova Gorica". On 24. 1. we have submitted the final report and in the following months prepared numerous additional documents and data as requested by the ministry.
From the beginning of the year untill November we have been regularly, on the monthly basis, preparing the documents for financial reporting of the project DeFISHGEAR. In November we have prepared the final budget change submitted the final report.

In February we were preparing additional explanations and data necessary for the closure of project "Creative Cores – AHA MOMENT". In this monthe we prepared also the final budget of project CITIUS since it received additional 'overbooking' funds.

In January and February we participated in preparation of project proposal 'RETINA' which was submitted to the call of Cross-border Collaboration Programme INTERREG Slovenija – Avstrija where UNG's role was Lead Partner. We participated in partnership definition, budget design and lead the preparation of administrative documents for the application (partnership agreement, partner statements, etc.). The project proposal was included on the waiting list which resulted in re-submission of adjusted proposal to the second call at the end of July. The adjustments needed were quite consequential: smaller budget, additional partner and adjusted content.

In January and February we were finalizing the final report for the project MODEF, we prepared and submitted final report of projects PRATICONS, PROTEO and TRECORALA. We prepared additional explanations within project PRATICONS.

In March we supported the preparation of project proposal of prof. Urbančič to the call of INTERREG ADRION Programme where UNG's role was Lead Partner. We participated in all aspects of proposal preparation: definition of partnership, administrative aspects, help with content definition, electronic submission, etc.
In June and July we were occupied by second-level review of CENILS project. It was reviewed by Ernst&Young. In September we got a visit of second-level reviewers for the project HERITASTE. It was revewed by the Republic of Slovenia's Budget Supervision Office.

From mid July untill end of September we supported the process of project proposal application to the call that used to be the most important for the university in the past financial period from the point of view of financial benefits. (Call of INTERREG Slovenija-Italija Cross-border Collaboration Programme). We prepared administrative documents for 18 project proposals, 13 were successfully submitted. We guided and/or supervised preparation of budgets for all those proposals. UNG took the role of Lead Partner within one of the proposals, and the role of a shadow Lead Partner in another (we carried out all activities as LP although LP is another partner). Head of the Office independently took over preparation of contents for one proposal that involves UNG as a whole and not only singkle department as usual in other proposals.

In October we prepared final report within project HERA TTT. In November we prepared and submitted financial report for the project Researcher's Night SciFe. In December we prepared and submitted financial report of the project HETMAT.

From September untill the end of the year we were busy with finalizing of four projects from previous financial period of the Cross-border Collaboration Programme Slovenija-Italija which involved UNG in the role of Lead Partner (CITIUS, GOTRAWAMA, ASTIS in AGRIKNOWS). Because of the fact that people involved in the implementation of those projects in most of the cases are not emplyed at UNG anymore, it was necessary to get involved into explanation and providing proofs of realized contents besides financial aspects of project closure.

International Office

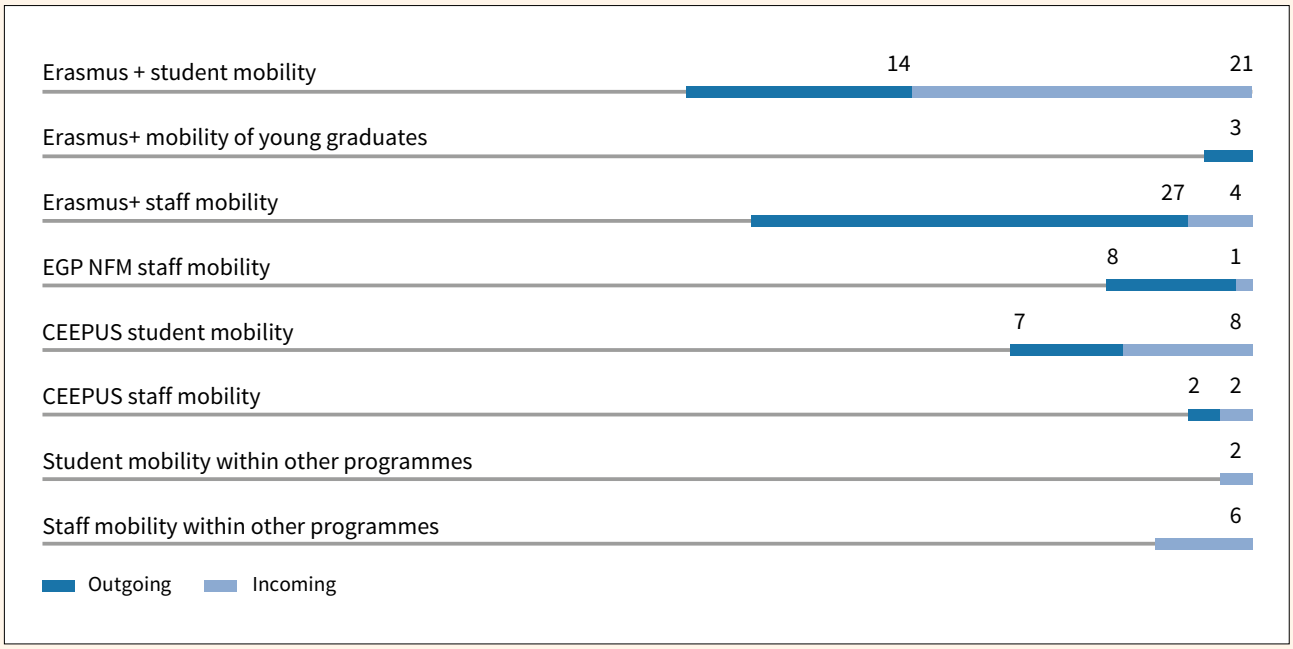
(Head: Sabina Zelinšček)

University of Nova Gorica has 44 cooperation agreements and 68 Erasmus+ Inter-institutional agreements with institutions from 40 different countries.

The University of Nova Gorica regularly cooperates with many similar foreign institutions around the world. In 2016 the UNG has signed 2 general cooperation agreements with the institution Cinedays Festival of European Film, Macedonia and the University of Trieste, Italy and 12 Erasmus+ Inter-institutional agreements with the Universita degli Studi di Napoli "Parthenope", Italy, Charles University, Czech Republic, Maynooth University, Ireland, Ss. Cyril and Methodius University in Skopje, Macedonia, Dokuz Eylul University, Turkey, University of Natural Resources and Life Sciences, Vienna, Austria, Goethe University, Germany, Ludwig Maximilian University of Munich, Germany, University of Rijeka, Croatia, University of Stavanger, Norway, Agrarian Azerbaijan State University, Azerbaijan and with Southwest University of Science and Technology, China.

Active participation in the programs that support international mobility and inter-institutional projects in the field of education and training such as Erasmus+, Ceepus and EEA NFM is a logical result of the University operation and its pursuit of objectives. The mobility projects in which the University participated in 2016 contributed to increased internationalization, especially in terms of creating possibilities for mobility of employees, students and young graduates. In 2016, 105 exchanges were realised in the context of different collaborations and projects. The International Office provided all required information and support to the participants before, during and after mobility.

Exchanges within the mobility program helped individuals improve many personal competences, strengthened cooperation with partner institutions and increased the possibility for further collaboration in other areas. This is why the International Office during the year promoted the mobility projects and presented its positive results in two informative workshops, in many individual meetings and in a panel discussion entitled "Study abroad, why participate in student exchange programs or study abroad?" that took place during the University Week.



On 7 December, CMEPIUS (The Center of the Republic of Slovenia for Mobility and European Educational and Training Programs) organized a formal celebration at the Union Hotel, intended for the delivering of "The apple of quality 2016" national awards, which are given out for best completed projects in the European educational and training programs.

In the category Slovene scholarship fund EGP and NFM, the University of Nova Gorica received the first prize for the project "Norwegian Mechanism and the University of Nova Gorica".

The project is based on a superbly organized and carried out mobility as part of the joint study program called EMMIR (European migrations and intercultural relations). It has been conducted within the scope of the School of Humanities and the scientific and research cooperation in the field of growing and producing of fruit for low alcohol drinks, all being connected to the Wine Research Center at the School for Viticulture and Enology.

Prof. Dr. Marina Lukšič Hacin (left), Prof. Dr. Branka Mozetič Vodopivec (in the middle) and Sabina Zelinšček (right).

Career Center

(Head: Nives Štefančič)

In 2016 we successfully applied to the tender of the Ministry of Education, Science and Sport and obtained financing for the project "Upgrading activities of career centers in higher education in the years 2015-2020". Assets of project are very low, so we had to optimize activities.

Our activities in 2016:
Career counseling to future students, current students and graduates - help guiding the career interests, studies, career development, help in establishing contacts with companies and job search.

Activities in the context of practical training; Participation in the presentations of interim reports of the practical training of students of School of Engineering and Management in companies RUT d.o.o., Gen-I d.o.o., Intra Ligting d.o.o., Kabelska televizija d.o.o., Mahle Letrika d.d., Nestle Adriatic d.o.o

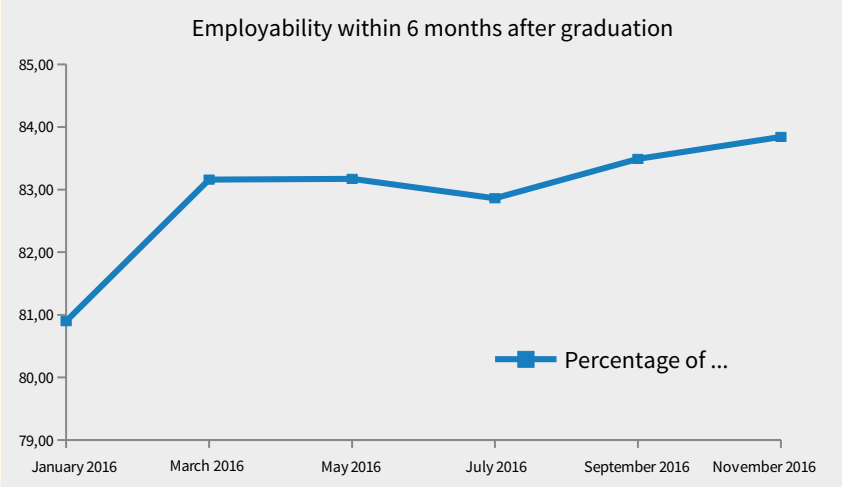
Contacts with employers; 14 meetings with employers - participation in the presentations of interim reports of the practical training of students (six companies). Meeting with representative of the company Iskra d.d. for the call "Iskra student challenge". Meeting with the head of human resources of the company Salonit Anhovo d.d. Presentation of Career Center at the regional job fair to companies Mercator d.d., Salonit Anhovo d.d., Avrigo d.d., Intra ligting d.o.o., Polident d.d., GEN-I d.o.o.

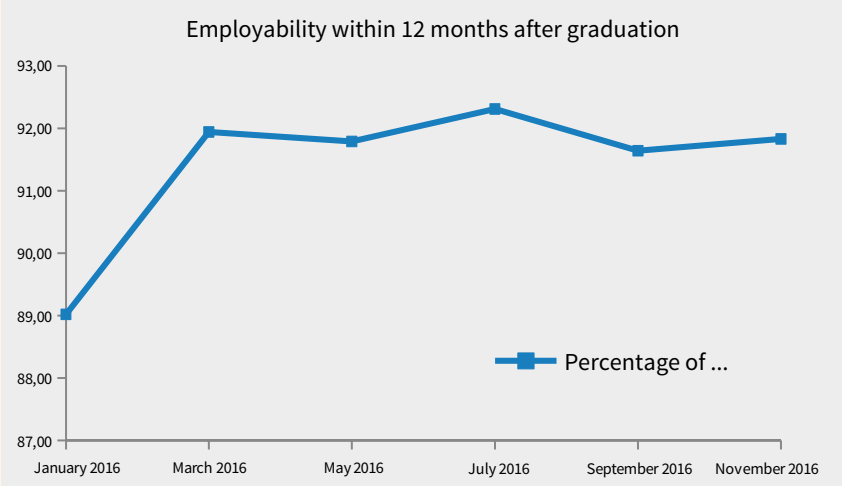
Promotion the University and Career Center; at Informativa 2016, Info days for 1st and 2nd level study, at the regional job fair. Career Centre had conducted a presentation for LUNG (People's University Nova Gorica) and their partner institutions in project Adeigus; Partners in the project Leerwinkel Belgija, Omnia Finska, Social Innovation Fund Litva, Aspire-Igen UK, BEST Institut Avstrija, LUNG Slovenija. We took part in three working meetings with representatives of other Career Centers, where we have established new ties with career centers of higher education institutions. We helped organized a round table at the School of Engineering and Management.

Institute of the Republic of Slovenia for Vocational Education and Training we asked to consider a proposal from the School of Engineering and management to update the catalog of providers of secondary education programs with the profession of economic engineer. The proposal was discussed in December 2016. We have received the answer that the acquired knowledge in the field of "economic engineer" is appropriate for the implementation of technical modules Economics technician, administrator and trader.

Informing students and graduates of suitable vacancies, practices abroad, current events, competitions; we published over the 85 job vacancies and practices abroad. We published also 13 invitations to events organized by the Primorski tehnološki park (PTP) and other events (Iskra Student Challenge 2016, Spirit workshops). We published 12 career news sent to 526 e-mail addresses of students and graduates.

Checking the employability of graduates six months and one year after graduation, in the months January 2016, March 2016, May 2016, July 2016, September 2016, November 2016.





Alumni Club

(Head: Nives Štefančič)

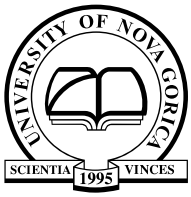
Alumni Club of the University of Nova Gorica in 2016 continued with activities to increase connection between University and Alumni:

- We upgraded informations about Alumni and informed them about activities of Alumni Club.
- We invited them to become promotors within their schools, to join to the University at variety of promotional activities.
- We invited Alumni of the School of Humanities to send their comments regarding study programs. Their opinions were taken in consideration in renovation of the study programs.
- We informed Alumni about scholarships, competitions, opportunities for postgraduate studies at home and abroad.
- We informed them about the possibility of acquiring the Diners Club FUNG Card.
- We informed them about job vacancies and events organized by the Primorski tehnološki park.
- We invited them to different events of the University of Nova Gorica (scientific evenings, information days, University of Nova Gorica week, semester and annual exhibitions, student wine festival, to the final presentation of the subject Industrial Design).
- We published Alumni News, in March and June 2016.

Graduates in year 2016 received the following awards:

- Dr. jernej Mlekuž (Graduate School): Book "Burek: A Culinary Metaphor", which was created as an upgrade of the doctoral dissertation of PhD alumni of programme Intercultural Studies - Comparative Studies of Ideas and Cultures was selected at the competition Gourmand Best in the World as the winning Slovenian book, and was ranked among the world's finalists in the category of Best Food Writing Book.
- Urška Djukić (School of Arts): At the 19th Festival of Slovenian Film in Portorož a graduate of Master programme of Academy of Arts has won the grand prize in the section of short films for her first professional film "Bon appetit, life!"

In 2016 our Alumni also participated as promoters at schools - at the roundtable of the School of Engineering and Management, at the School of Humanities. They also participated at the external evaluations of the University study programs.



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