

**MATHEMATICIANS**  
**at UP IAM and UP FAMNIT**  
**Report 2012**



UNIVERSITY OF PRIMORSKA

FACULTY OF MATHEMATICS, NATURAL SCIENCES AND INFORMATION TECHNOLOGIES  
(UP FAMNIT)

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**Mathematicians at UP IAM/UP FAMNIT Report 2012**

Edited by Iva Antončič, Samed Bajrić, Ademir Hujdurović, Boštjan Frelj, Sergio Hiroki Koike  
Quintanar, Karla Počkaj and Ana Uršič.

Koper, February 2013.



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## UNIVERSITY OF PRIMORSKA (UP)

The University of Primorska (Univerza na Primorskem; Università del Litorale; UP) was established by the Slovenian parliament on January 29, 2003 and was registered at the District Court of the city Koper on 3 March, 2003 thus becoming a legal entity.

The UP is a public institution, financed by the Slovenian Government. The activities of the UP are focused on offering high-quality study programs, active inclusion of students in research work and researchers in teaching, and on internationally comparable achievements in the fields of research and education.



### Members of the University of Primorska:

- Faculty of Built Environment;
- Faculty of Humanities;
- Faculty of Management;
- Faculty of Mathematics, Natural Sciences and Information Technologies;
- Faculty of Education;
- Faculty of Tourism studies;
- Faculty of Health Care;

### 2 research institutes:

- Science and Research Centre;
- Andrej Marušič Institute;
- University Library;
- Students' Residence;

### One associate member:

- College of Design Ljubljana.

## International Cooperation

The UP strives to strengthen the international and cross-border cooperation and projects.

- Fields of project cooperation: Research, Education, Applied Sciences, Student and Faculty Mobility.
- Themes of project cooperation: Intercultural dialogue, Languages, Cultural heritage, History, Anthropology, Geography, Education, Sociology, Management, Tourism, Environment, Agriculture, Health, Mathematics, Informatics, Kinesiology and Ergonomics, etc.
- Partner institutions from: Austria, Croatia, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Lithuania, Netherlands, Norway, Poland, Spain, UK, etc.

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## **FACULTY OF MATHEMATICS, NATURAL SCIENCES AND INFORMATION TECHNOLOGIES (UP FAMNIT)**

Glagoljaška 8, SI-6000 Koper, Slovenia

[info@famnit.upr.si](mailto:info@famnit.upr.si), [www.famnit.upr.si](http://www.famnit.upr.si)

The Faculty of Mathematics, Natural Sciences and Information Technologies (UP FAMNIT) was established by UP in the year 2006 for the purpose of balancing the social sciences with the natural sciences. The faculty is committed to integrating mathematics



(the universal language of science) with computer science (the modern language of computation and information technology) into study programs which provide graduates of UP FAMNIT as well as UP with exceptional knowledge of these essential disciplines.

The faculty works closely with the Andrej Marušič Institute (UP IAM) to provide opportunities for research experience to students. The faculty is also benefiting and constantly improving from close collaboration with UP IAM through involvement in interdisciplinary research and exposure to current research. Nowadays it is not enough to excel in one field or sector - an interdisciplinary approach is needed. The fundamental questions that face humanity today are too complex to be answered through just one sector of expertise.

The faculty operates five departments:

- Department of Applied Sciences,
- Department of Biodiversity,
- Department of Information Sciences and Technologies,
- Department of Mathematics,
- Department of Psychology.

The total number of employees in the current academic year (2012/13) is: 89 full-time and 45 part-time teaching and research staff, of which 8 are full-time and 11 part-time foreign professors and researchers, and 13 administrative staff.

### **Educational Activities**

The first generation of students were enrolled in UP FAMNIT in the academic year 2007/08. In the current academic year (2012/13), the Faculty offers eight undergraduate university programs (BA), four Master (MS) and three PhD programs:

Undergraduate university programs (BA) (3 years):

- Mathematics
- Mathematics in Economics and Finance
- Computer Science
- Bioinformatics
- Biodiversity
- Biopsychology
- Mediterranean Agriculture
- Applied Kinesiology

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Master's (MS) programs (2 years):

- Mathematical Sciences
- Computer Science
- Applied Kinesiology
- Nature Conservation

In 2013/14 a new Master's programme Mathematics with Financial Engineering will also be available for enrolment.

Doctoral (PhD) programs (3 years):

- Mathematical Sciences
- Computer Science
- Applied Kinesiology

In the 2012/13 academic year, 700 students have been enrolled in study programmes, of which 589 are in undergraduate programmes, 79 in master's programmes, and 32 in doctoral programmes. The undergraduate programmes are all offered on a full-time basis, while the master's programmes are offered both on a full-time and part-time basis. The doctoral programmes are offered only on a part-time basis. All courses/programs are designed in accordance with Bologna Declaration.

## **Research**

Research data / indicators as of the 31st of December, 2012:

- The number of registered researchers: 73 (of which 1 was a young researcher).
- Average number of points according to the methodology SICRIS per registered researcher at ARRS in 2012 = 61.13 points.
- The effectiveness based on ARWU methodology - total number of published work of our researchers in journals that are indexed in databases SCI, SSCI and AHCI in 2012 = 95 publications.
- The average number of normalized citations per registered researcher (within the last 10 years) = 114.92 citations.

## **International and inter-university cooperation**

Since its establishment, international mobility of professors and researchers has been one of the basic policies of the Faculty.

The teaching and research staff at the Faculty is highly international. The Faculty is involved in a number of bilateral projects, both independently and in collaboration with the University of Primorska, Andrej Marušič Institute (UP IAM).

As at any faculty included in the sphere of international educational, the students, graduates, teachers and researchers can integrate into the European Higher Education Area and beyond through UP FAMNIT, as well as incorporate their courses with the programmes in universities abroad.

Professors and colleagues actively participate in international scientific conferences, meet-

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ings and summer schools in their scientific field. They also feature as keynote speakers in several international conferences, and lecture at universities abroad as visiting lecturers.

The international integration of the Faculty is also reflected in the attractiveness for its doctoral and postdoctoral training for foreigners. In recent years, UP FAMNIT has hosted several foreign students (Hungary, China, USA, etc.) for postdoctoral training. In 2012, four mathematicians have been attending postdoctoral training at UP FAMNIT - one from Canada, one from Slovakia and two from Poland. We are also recording more students attending doctoral studies in mathematics, even among young researchers. Of the ten young researchers at UP FAMNIT and UP IAM, six are foreigners (from five different countries: Bosnia and Herzegovina, Mexico, Poland, Russia and Slovakia).

The Faculty is an organiser and co-organiser of resounding international conferences.

Successful international cooperation is also reflected in the numerous contacts our professors and researchers have with scientists from prestigious foreign universities and their visits to UP FAMNIT and UP IAM : Eötvös Loránd University, Budapest, Hungary; University of Pécs, Hungary; Montanuniversität, Leoben, Austria; Univerzita Mateja Bela, Banská Bystrica, Slovakia; Komenius University, Bratislava, Slovakia; Lulea University of Technology, Luleå, Sweden; Rutgers, The State University of New Jersey, USA; Ohio State University, Columbus, USA; Mississippi State University, Starkville, USA; Northern Arizona University, Flagstaff, USA; University of Wisconsin, Madison, USA; Colgate University, USA; University of Washington, Seattle, USA; University of Waterloo, Canada; University of Lethbridge, Canada; University of Beijing, China; Capital Normal University, Beijing, China; Northern Jiaotong University, Beijing, China; POSTECH University, South Korea and many others.

UP FAMNIT has adopted the Erasmus programme aimed at the cooperation and exchange of students and teaching staff in higher education, the CEEPUS programme, a Central European programme for the exchange of students and professors, and has signed bilateral agreements with many foreign institutions.

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## ANDREJ MARUŠIČ INSTITUTE (UP IAM)

Muzejski trg 2, SI-6000 Koper, Slovenia

[info@iam.upr.si](mailto:info@iam.upr.si), [www.iam.upr.si](http://www.iam.upr.si)



UP PINT (University of Primorska, Primorska Institute for Natural and Technical Sciences) was founded in 1999 as an independent public research institution and as such registered in the register of the District Court of Koper on the 27th of September 1999. On the 14th of October 2011 the UP PINT was renamed to the University of Primorska, Andrej Marušič Institute (UP IAM). As from this date the Institute legally operates under the new name (hereinafter referred to as UP IAM).

UP IAM carries out fundamental and applied research, is involved in international scientific cooperation, and establishes connections with similar organizations around the world, in line with its development program. With its researchers, habilitated teachers and assistants, UP IAM is involved in educational activities of the University of Primorska (UP) and cooperates with members and Associated members of the UP in designing proposals for new courses and new programs of UP, as well as in establishing new faculties.

Natural sciences and technology are foundations on which industry is based, therefore their high quality development is of strategic importance. In the UP, UP FAMNIT and UP IAM are responsible for development of natural sciences and technology. Both institutions are committed to making continuous efforts towards excellent work quality and to persisting in their efforts to move closer to the top of the scientific world. Being on top entails not only being successful within one field, but requires an excellent interdisciplinary performance, which involves working beyond traditional and sharp divisions among the basic areas of human science (natural sciences, technology, social sciences, and humanities). Basic questions of humankind are simply too complex to allow for answers only using tools or through the perspective of a single scientific discipline. Therefore, both institutions seek primarily to develop a single, uniform or linked science.

The research activities are organized into four research and development units: Department of Technology, Department of Mathematics, Department of Information Science and Technologies, and Department of Health Study. All units are strongly tied in interdisciplinary studies.

At the Department of Mathematics research is carried out mainly in algebra, combinatorics and graph theory with probability theory and is strongly connected with all other departments. Department of Information Science and Technologies conducts research on data structures, data mining, large-scale distributed GRID architectures, and in collaboration with Department of Health Study in the field of e-health. The core activity of the Department of Technology is environment protection and the technology associated with it.

Within institute there are also two centers. The Slovene center for research of suicide (SCRS), founded in 2011, is the first such center in Slovenia, which field is capturing above all innovative manners in approach to research of problem of suicide. The Center for Industrial Applications (CIA) was founded in 2012, with aim to strengthen the transfer of knowledge and good practices from research to industry.

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## MATHEMATICIANS AT UP IAM/UP FAMNIT

UP IAM and UP FAMNIT currently includes 47 mathematicians:

Prof. DOBSON Edward  
Prof. GRAVNER Janko  
Prof. MALNIČ Aleksander  
Prof. MARUŠIČ Dragan, Rector UP  
Prof. PISANSKI Tomaž  
Prof. POTOČNIK Primož  
Prof. STEVANOVIĆ Dragan  
Asoc. Prof. KOVÁCS István  
Asoc. Prof. KUZMA Bojan  
Asoc. Prof. MIKLAVIČ Štefko, Vice-rector for Research UP  
Asoc. Prof. PERMAN Mihael  
Assist. Prof. BOBEN Marko  
Assist. Prof. ANCHOLCER Marcin, Postdoc Researcher  
Assist. Prof. BOLDIN Barbara, Postdoc Researcher  
Assist. Prof. HORVAT Boris  
Assist. Prof. JAKLIČ Gašper  
Assist. Prof. KUTNAR Klavdija, Dean UP FAMNIT  
Assist. Prof. MILANIČ Martin, Vice-dean UP FAMNIT  
Assist. Prof. OREL Marko, Vice-dean UP FAMNIT  
Assist. Prof. PAŠALIĆ Enes  
Assist. Prof. ULE Aljaž  
Assist. Prof. VERRET Gabriel, Postdoc Researcher  
Assist. Prof. VITRIH Vito, Director UP IAM  
Assist. Prof. ZGRABLIĆ Boris  
Assist. Prof. ZHANG Cui, Postdoc Researcher  
Dr. CICHACZ - PRZENIOSŁO Sylwia, Postdoc Researcher  
Dr. JERMAN Marjan  
Dr. KAVKLER Iztok  
Dr. LUKŠIČ Primož  
Dr. MAČAJ Martin, Postdoc Researcher  
Dr. ORBANIĆ Alen  
Dr. RAIČ Martin  
Dr. TONEJC Jernej  
ANTONČIČ Iva  
BAJRIČ Samed, Young Researcher  
BERČIČ Katja, Young Researcher  
CERINŠEK Monika  
ESTÉLYI István, Young Researcher  
FRELIH Boštjan, MSc  
HUJDUROVIĆ Ademir, Young Researcher  
KOIKE QUINTANAR Sergio Hiroki, Young Researcher  
PETECKI Paweł, Young Resercher  
POČKAJ Karla, Young Researcher  
POŽAR Rok, Young Researcher



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TISNIKAR Viljem  
URŠIČ Ana, Young Researcher  
VASILYEV Alexander, Young Researcher



## RESEARCH PROGRAMS

- 2009-2014: Algebra, Discrete Mathematics, Probability and Game theory; leader: Dragan Marušič.
- 2009-2014: Computationally Intensive Methods in Theoretical Computer Science, Discrete Mathematics, Combinatorial Optimization and Computational Analysis and Algebra with Applications in Natural and Social Sciences; leader: Tomaž Pisanski.

## RESEARCH PROJECTS

- 2009-2012: J1-2055 On the Problem of Existence of Semiregular Elements in 2-closed Transitive Groups with Application in Vertex-transitive Graphs; leader: Dragan Marušič.
- 2010-2013: J5-3638 An Introduction to New Intervention Strategies for Reducing Suicidal Behaviour in Slovenia; leader: De Leo Diego.
- 2011-2012: SUMOFIN - Monitoring the Effectiveness of Health Care Financing Model; leader: Alen Orbanič.
- 2011-2013: Z1-4006 Hamilton Cycles in Vertex-transitive Graphs; postdoc project; leader: Klavdija Kutnar.
- 2011-2013: Z7-4052 PH Curves and their Generalizations; postdoc project; leader: Vito Vitrih.
- 2011-2014: J1-4021 Algebraic Graph Theory and Applications; leader: Dragan Marušič.
- 2011-2014: J1-4010 Bipartite Distance-regular Graphs; leader: Štefko Miklavič.
- 2011-2014: KC CLASS - Cloud Assisted Services; leader: Boris Horvat.
- 2011-2014: L1-4292 Detection of Irregularities and Fraud in the Financing of Public Health Services; leader: Primož Potočnik.
- 2011-2014: N1-0011 GReGAS - Geometric Representations and Symmetries of Graphs, Maps and other Discrete Structures and Applications in Science; ESF EuroGiga project; leader: Tomaž Pisanski.
- 2011-2014: SAFEPORT - Management of Industrial and Environmental Risks in the Port; leader: Jure Pražnikar.
- 2012-2014: TISAR - Traveller Information System for the Adriatic Region; leader: Primož Lukšič.

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## BILATERAL PROJECTS led by Math Department 2012 – to date

- 2009-2012: Bipartite Distance-regular Graphs: bilateral scientific - research cooperation between Slovenia and the USA, UP IAM and University of Wisconsin-Madison.
- 2009-2012: Semiregular Automorphisms in Vertex-transitive Graphs: bilateral scientific - research cooperation between Slovenia and the USA, UP IAM and Mississippi State University.
- Transitive Group Actions with Applications in Combinatorics: bilateral scientific - research cooperation between Slovenia and China, UP IAM and Beijing Jiaotong University.
- 2011-2012: Algebraic, Topological and Algorithmic Methods in Classification of Discrete Structures: bilateral scientific - research cooperation between Slovenia and Slovakia, UP IAM and Univerzita Komenskeho.
- 2011-2012: Hamiltonicity of Vertex-transitive Graphs: bilateral scientific - research cooperation between Slovenia and the USA, UP IAM and Ohio State University.
- 2011-2012: Algebraic Aspects of Symmetry in Topology and Combinatorics: bilateral scientific - research cooperation between Slovenia and South Korea, UP IAM and Pohang University of Science and Technology - POSTECH.



Dragan Marušič, Klavdija Kutnar and Rok Požar on a research visit at POSTECH

- 2011-2012: Algebraic Techniques for Three problems in Graph Theory: bilateral scientific - research cooperation between Slovenia and the Flemish region, UP IAM and Vrije Universiteit Brussel.
- 2011-2012: Geometries, Graphs, Groups and their Links II: bilateral scientific - research cooperation between Slovenia and Hungary, UP IAM and University of Pécs.
- 2011-2012: Spectral Theory of Linear Operators and Reflexivity: bilateral scientific - research cooperation between Slovenia and Czech republic, IMFM and Institute of Mathematics of the Academy of Sciences of the Czech.
- 2011-2013: Cryptographically Significant Boolean Functions with Applications in Stream and Block Ciphers: bilateral scientific - research cooperation between Slovenia and India, UP IAM and Indian Institute of Technology.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Australia: Semiregular Automorphisms.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Canada: Hamiltonicity of Cayley Graphs.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Germany: Schur Rings in Algebraic Graph Theory.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Iran: Sym-

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metries in Graphs.

- 2012: Scientific Research Cooperation between the Republic of Slovenia and Israel: Association Schemes in Algebraic Graph Theory.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Mexico: Symmetries in Graphs and Polytopes.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and New Zealand: Algorithmic Aspects of Covering Projections.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and New Zealand: Half-arc-transitive Graphs.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Spain: A Mathematical Model for Developing Vaccine against HIV.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Spain: Permutation Groups.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Spain: Strongly Regular (Di)Graphs and Quasi  $m$ -Cayley graphs.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and South Africa: Graph Enumerations.
- 2012: Scientific Research Cooperation between the Republic of Slovenia and Switzerland: Graph Polynomials.
- 2012-2013: Numerical Characterizations of Graph Properties: bilateral scientific - research cooperation between Slovenia and USA, UP IAM and Rutgers Center for Operations Research.
- 2012-2013: Schurian and Separable Schur Rings: bilateral scientific - research cooperation between Slovenia and the Russian Federation, UP IAM and St. Petersburg Department of V. A. Steklov Institute of Mathematics of the Russian Academy of Sciences.
- 2012-2013: Strongly Regular (Di)graphs: bilateral scientific - research cooperation between Slovenia and USA, UP IAM and Worcester Polytechnic Institute.
- 2012-2013: Mathematical Models of Evolutionary Dynamics of Infectious Diseases with a Variety of Transmission Modes: bilateral scientific - research cooperation between Slovenia and Finland, UP IAM and University of Helsinki.
- 2012-2014: Graph Width Parameters and Graph Powers: bilateral scientific - research cooperation between Slovenia and Argentina, UP IAM and Universidad Nacional de La Plata.

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**Ars mathematica contemporanea** is publishing high-quality articles in contemporary mathematics that arise from the discrete and concrete mathematics paradigm. It favors themes that combine at least two different fields of mathematics. In particular, it welcomes papers intersecting discrete mathematics with other branches of mathematics, such as algebra, geometry, topology, theoretical computer science, and combinatorics. The name of the journal was chosen carefully. Symmetry is certainly a theme that is quite welcome to the journal, as it is through symmetry that mathematics comes closest to art.



Founding Editors and Editors-in-Chief: Dragan Marušič and Tomaž Pisanski



## ESF EuroGIGA GReGAS, 2011 - 2013

European Science Foundation

Graphs in Geometry and Algorithms

Geometric representations and symmetries of graphs,  
maps and other discrete structures and applications in  
science



**Project leader:** Tomaž Pisanski, Slovenia

**Leading Organization:** UP

**PI countries:** Croatia, Germany, Slovakia, Slovenia, Turkey

**AP countries:** Austria, Belgium, New Zealand, Israel, USA, UK

### Principal Investigators:

Vladimir Batagelj, SI

Turker Biyikoglu, TUR

Sandi Klavžar, SI

Antoaneta Klobučar, CRO

Dragan Marušič, SI

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Mikhail Klin, IL

Dimitri Leemans, BE

Josef Leydold, AUT

Egon Schulte, USA



Tomaž Pisanski, Aigars Ekers (ESF representative), Dragan Marušič, Štefko Miklavič

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University of Ljubljana



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## ORGANIZED EVENTS IN 2012

### Graph Theory Semester

May - June, Koper, Slovenia

<http://famnit.upr.si/sl/konference//SGT2012>

#### Organized by:

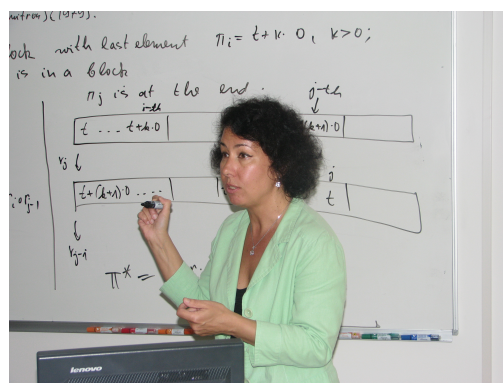
UP FAMNIT and UP IAM

#### Organizing Committee:

Klavdija Kutnar, Aleksander Malnič, Dragan Marušič, Štefko Miklavič.

The Semester consisted of four minicourses (of 20 hours each):

- Symmetry Breaking in Graphs, given by Wilfried Imrich (University of Leoben, Austria).
- Combinatorial Problems on Cayley graphs, given by Elena Valentinova Konstantinova (Sobolev Institute of Mathematics, Russia).
- Selected Topics from Graph Theory, given by Adam Paweł Wojda (AGH University of Science and Technology, Poland).
- Graphs and their coverings, given by Roman Nedela (Matej Bel University, Slovakia).



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### 3rd Workshop on Symmetries of Graphs and Networks (SYGN 2012)

June 24 - 30, Rogla, Slovenia

<http://famnit.upr.si/sl/konference//DM2012>

**Number of participants:** 60+

**Organized by:**

UP FAMNIT and UP IAM

**in collaboration with:**

Centre for Discrete Mathematics, UL Pef - University of Ljubljana

**Sponsors:**

ARRS - Slovenian Research Agency

**Scientific Committee:**

Edward Dobson, Aleksander Malnič, Dragan Marušič, Štefko Miklavič

**Organizing Committee:**

Klavdija Kutnar, Boštjan Kuzman, Primož Šparl

**Invited speakers:**

Jin Ho Kwak (Pohang University of Science and Technology, South Korea)

Young Soo Kwon (Yeungnam University, South Korea)

Joy Morris (University of Lethbridge, Canada)

Roman Nedela (Matej Bel University, Slovakia)

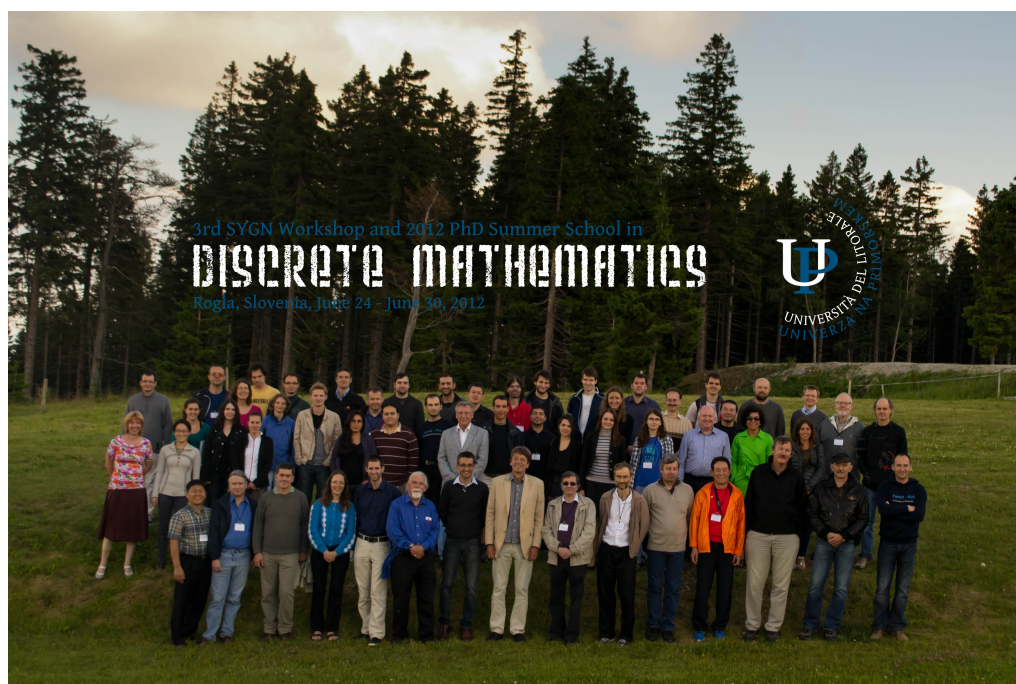
Tamás Szőnyi (Eötvös Loránd University, Hungary)

Norbert Seifter (Montanuniversität Leoben, Austria)

Jozef Širáň (Open University, UK & Slovak University of Technology, Slovakia)

Paul Terwilliger (University of Wisconsin-Madison, USA)

Steve Wilson (Northern Arizona University, USA)





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## PhD Summer School in Discrete Mathematics

June 24 - 30, Rogla, Slovenia

<http://famnit.upr.si/sl/konference//DM2012>

**Number of participants:** 60+

**Organized by:**

UP FAMNIT and UP IAM

**in collaboration with:**

Centre for Discrete Mathematics, UL Pef - University of Ljubljana

**Sponsors:**

ARRS - Slovenian Research Agency

**Scientific Committee:**

Edward Dobson, Aleksander Malnič, Dragan Marušič, Štefko Miklavič

**Organizing Committee:**

Klavdija Kutnar, Boštjan Kuzman, Primož Šparl

**The Summer School consisted of three minicourses (of six hours each):**

- The Polycirculant Conjecture, led by Michael Giudici (University of Western Australia, Australia)
- Finite Geometries (from the definitions to some applications), led by György Kiss (Eötvös Loránd University, Hungary)
- Graph Enumeration, led by Stephan Wagner (Stellenbosch University, South Africa)



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## Computers in Scientific Discovery 6 (CSD6)

August 21 - 25, Portorož, Slovenia

<http://conferences2.imfm.si/conferenceDisplay.py?confId=12>

**Number of participants:** 60+

**Organized by:**

UP IAM

**in collaboration with:**

IMFM - Institute of Mathematics, Physics and Mechanics

UL FMF - University of Ljubljana, Faculty of Mathematics and Physics

UP FAMNIT - University of Primorska, Faculty of Mathematics, Natural Sciences and Information Technologies

UP TURISTICA - University of Primorska, Faculty of Tourism Studies

**Sponsors:**

ARRS - Slovenian Research Agency

ESF EuroGIGA GReGAS - European Science Foundation, Graphs in Geometry and Algorithms, Geometric representations and symmetries of graphs, maps and other discrete structures and applications in science

ESRR KC Class - European Regional Development Fund, Cloud Assisted Services

**Scientific Committee:**

Patrick Fowler, Klavdija Kutnar, Tomaž Pisanski

**Organizing Committee:**

Ademir Hujdurović, Boštjan Frelih, Klavdija Kutnar, Alen Orbanić, Tomaž Pisanski

**Keynote speakers:**

Oswin Aichholzer (University of Technology Graz, Austria), Alexandru Balaban (Texas A&M University at Galveston, USA), Gunnar Brinkmann (University of Ghent, Belgium), Arnout Ceulemans (K.U.Leuven, Belgium), Kris Coolsaet (University of Ghent, Belgium), Ernesto Estrada (University of Strathclyde, UK), Patrick Fowler (University of Sheffield, UK), Ante Graovac (University of Split, Croatia), Adalbert Kerber (University of Bayreuth, Germany), Bojan Mohar (Simon Fraser University, Canada & IMFM, Slovenia), Milan Randić (National Institute of Chemistry, Slovenia), Dragan Stevanović (University of Niš, Serbia & University of Primorska, Slovenia), Ian Wanless (Monash University, Australia), Jure Zupan (National Institute of Chemistry, Slovenia), Nobelist Harold Kroto (Florida State University, USA).



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## Workshop on Combinatorial Algorithms in Bioinformatics

September 13, Koper, Slovenia

<http://wiki.techfak.uni-bielefeld.de/gi/CombAlgBioinfWorkshop2012>

**Number of participants:** 30+

**Organized by:**

UP IAM, UP FAMNIT and University of Bielefeld

**Scientific Committee:**

Martin Milanič, Jens Stoye

**Organizing Committee:**

Martin Milanič

**Invited Speakers:**

Marília Braga (Bioinformatics Research Group, Inmetro, Brazil)

Brona Brejova (Comenius University, Slovakia)

Dan Brown (University of Waterloo, Canada)

Simon Dobrišek (University of Ljubljana, Slovenia)

Katharina Jahn (Bielefeld University, Germany)

Matevž Jekovec (University of Ljubljana, Slovenia)

Luis Martínez Fernández (University of the Basque Country, Spain)

István Miklós (Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences, Hungary)

Matthias Mnich (Saarland University, Germany)

Cinzia Pizzi (University of Padova, Italy)

Kati Rozman (National Institute of Chemistry, Ljubljana, Slovenia)

Jens Stoye (Bielefeld University, Germany)

Annelise Thévenin (Bielefeld University, Germany)



## LL2012: Ljubljana-Leoben Seminar 2012

September 20-22, Bovec, Slovenia

<http://www.fmf.uni-lj.si/~potocnik/LL2012/index.php>

**Number of participants:** 30+

### Organized by:

UL FMF - University of Ljubljana, Faculty of Mathematics and Physics

UP FAMNIT - University of Primorska, Faculty of Mathematics, Natural Sciences and Information Technologies

UP IAM - University of Primorska, Andrej Marušič Institute

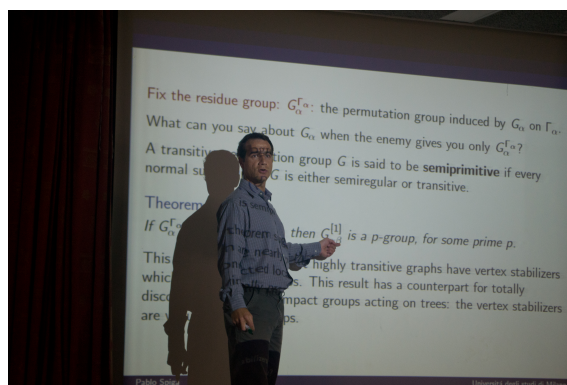
### Organizing Committee:

Norbert Seifter, Primož Potočnik, Aleksander Malnič, Katja Berčič

### Keynote Speakers:

Pablo Spiga, University of Milano-Bicocca, Italy

Wolfgang Woess, Graz University of Technology, Austria

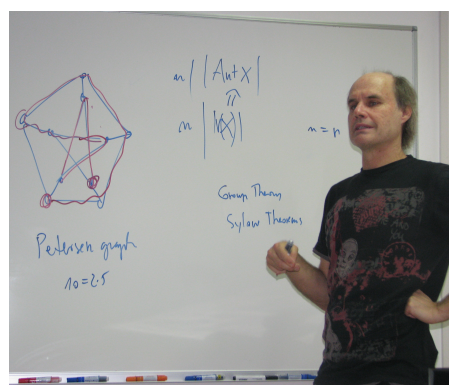




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## Research Mathematical Seminar in 2012

- 09/01/2012 Gabriel Verret (UP): Constructing a Census of Small Cubic Vertex-transitive Graphs
- 16/01/2012 György Kiss (Eötvös Loránd University, Hungary): Semi-arcs and Semiovals in  $PG(2, q)$
- 23/01/2012 Samed Bajrić (UP): Almost Perfect Nonlinear Functions
- 30/01/2012 Alexander Vasilyev (UP): Introduction to Sage. Examples of Application to Graph Theory
- 06/02/2012 Q. Sergio Hiroki Koike (UP): Isomorphic Tetravalent Cyclic Haar Graphs
- 20/02/2012 Vito Vitrih (UP): Pythagorean-hodograph Curves
- 27/02/2012 Klavdija Kutnar (UP): Cayley Snarks
- 05/03/2012 Marko Orel (UP): The Mathematics in Computed Tomography (CT)



- 12/03/2012 István Kovács (UP): The Isomorphism Problem for Rose Window Graphs
- 19/03/2012 Oliver Schaudt (Universität zu Köln, Germany): The Price of Connectivity for Vertex Cover
- 26/03/2012 Marcin Anchołcer (UP and Poznan University of Economics, Poland): Group Irregularity Strength of Graphs
- 28/03/2012 Gábor Gévay (University of Szeged, Hungary): Geometric  $(n_k)$  Configurations
- 02/04/2012 Martin Mačaj (UP and Comenius University, Slovakia): Nonorientable Regular Maps over Linear Fractional Groups
- 16/04/2012 Rok Požar (UP and IMFM Ljubljana): On the Split Structure of Lifted Groups
- 17/04/2012 Gustavo A. Fernandez Alcober (University of the Basque Country, Spain): Finite  $p$ -groups: the Basics, Generators, and Automorphisms
- 23/04/2012 Barbara Boldin (UP): Modelling Viral Evolution in a Heterogeneous Within-host Environment: Insights into the HIV Co-receptor Switch
- 07/05/2012 Mihael Perman (UP): Testing the Roulette Wheel
- 10/05/2012 Ademir Hujdurović (UP): Half-arc-transitive Graphs with Small Number of Alternets
- 10/05/2012 Nina Chiarelli (UP): Split Graphs and Threshold Graphs
- 14/05/2012 Roman Nedela (Matej Bel University, Slovakia): 6-decompositions of Snarks
- 17/05/2012 Iva Antončič (UP): Half-arc-transitive Graphs of Particular Orders
- 17/05/2012 Alexander Vasilyev (UP): Approach of Lazy Calculations in Application to Topological Graph Indices in Sage. Introduction to a New Molecular Class

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- 21/05/2012 Ilya Ponomarenko (V. A. Steklov Institute of Mathematics, Russia): Solvability of Finite Schur Groups
  - 24/05/2012 Samed Bajrić (UP): The Representations of Vectorial Boolean Functions
  - 24/05/2012 Q. Sergio Hiroki Koike (UP): The Isomorphism Problem for Cyclic Configurations
  - 28/05/2012 Wilfried Imrich (University of Leoben, Austria): The Distinguishing and Endomorphism Distinguishing Number of Graphs and Groups
  - 28/05/2012 Fabio Vlacci (Università degli Studi di Firenze, Italy): Introduction to Basic Properties of a New Class of Regular Functions of (Hypercomplex) Quaternionic Variable
  - 30/05/2012 Boštjan Frelj (UP): Amply Regular Graph Products
  - 30/05/2012 Karla Počkaj (UP): Construction of Rigid Body Motions
  - 04/06/2012 Adam Paweł Wojda (AGH University of Science and Technology, Poland): Cyclic  $q$ -partitions of Complete Uniform, and Non-uniform Hypergraphs
  - 04/06/2012 Jakub Przybyło (AGH University of Science and Technology, Poland): Distinguishing Neighbors via Combinatorial Nullstellensatz
  - 11/06/2012 Luca Rondi (University of Trieste, Italy): Inverse Problems and Free-discontinuity Problems: the Inverse Crack or Cavity Problem
  - 24/09/2012 Ferdinando Cicalese (University of Salerno, Italy): Models and Methodologies in Combinatorial Search
  - 08/10/2012 Martin Milanič (UP): On Graphs whose Complement and Square are Isomorphic
  - 15/10/2012 Pim van 't Hof (University of Bergen, Norway): Obtaining Planarity by Contracting Few Edges
  - 22/10/2012 Vesna Andova (Institute of Mathematics and Physics, Skopje, Macedonia): Diameter on Fullerene Graphs
  - 22/10/2012 Riste Škrekovski (FMF and IMFM, Ljubljana, Slovenia): Some Results on Network Centrality Indices
  - 29/10/2012 Gabriel Verret (UP): Growth of Automorphism Groups in Arc-transitive Graphs
  - 05/11/2012 Dragan Stevanović (UP): Spectral Approach to Network Partitioning Problems
  - 12/11/2012 Bojan Kuzma (UP): On maps which do not increase the Spectrum of Difference of Matrices
  - 19/11/2012 Endre Boros (Rutgers University, USA): Quadraticization of Pseudo-Boolean Functions
  - 26/11/2012 Dragan Marušič (UP): Primitive Groups of Degree Twice a Prime Number (Part I)
  - 03/12/2012 Dragan Marušič (UP): Primitive Groups of Degree Twice a Prime Number (Part II)
  - 11/12/2012 Pablo Spiga (University of Milano-Bicocca, Italy): Is the Theory of Finite Primitive Groups Finished?
  - 20/12/2012 Andreas Brandstädt (University of Rostock, Germany): On the Complexity of Some Packing and Covering Problems in Certain Graph Classes

**Seminar Coordinator:** Štefko Miklavč

More: <http://www.famnit.upr.si/sl//seminarji>

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## Summer Math Camp “Mathematics is Cool”, August 16 - September 1, 2012.

The camp intended for pupils in the last three years of primary schools and for those in secondary schools that are interested in mathematics. The camp included lectures and workshops on various mathematical topics and numerous social activities. The purpose was to show that mathematics can be both fun and useful.

More: <http://tabor.famnit.upr.si/>

### Organized by:

UP FAMNIT

UP IAM

### Organizing committee:

Bojan Kuzma

Martin Milanič

Vito Vitrih

### Speakers:

Ademir Hujdurović, UP

Aleksander Malnič, UL and UP

Aljaž Ule, UP

Andrej Brodnik, UP and UL

Barbara Boldin, UP

Bojan Kuzma, UP

Dragan Marušič, UP

Klavdija Kutnar, UP

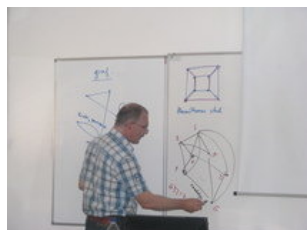
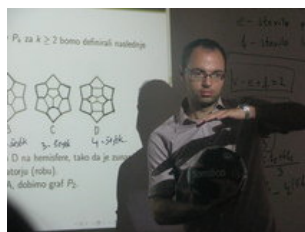
Nataša Kristan, UL

Olga Kaliada, UP

Rado Pezdir, UP

Simona Klemenčič, UL

Števk Miklavčič, UP



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## Famnit Summer School of Mathematical Finance, August 22 - 25, 2012.

The school intended both for pupils in their fourth year of secondary school and for university students who are interested in mathematical finance and the broader socio-philosophical context of financial and economic analysis.

More: <http://poletna-sola.si/>

### Organized by:

UP FAMNIT

### Organizing committee:

Rado Pezdir

### Speakers:

Aleš Ahčan, UL

Alojz Ihan, UL

Anže Burger, UL

Borut Pahor

Goran Klemenčič

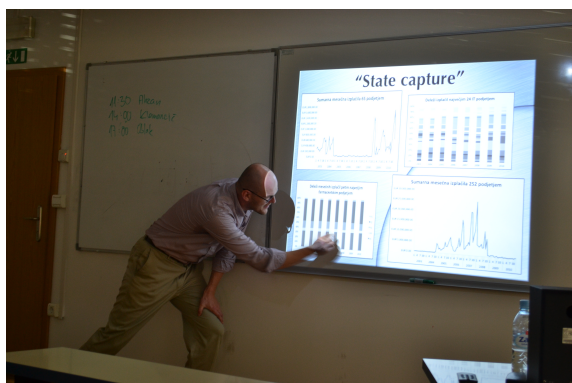
Leo Oblak

Luka Gubo

Matija Lozej, UL

Mihael Perman, UP and UL

Uroš Urbas





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## **Famnit Excursions into the Mathematical Universe, once a month.**

A series of popular lectures on mathematics and its role in the modern world.

More: <http://izleti.famnit.upr.si/>

### **Organized by:**

UP FAMNIT and UP IAM

### **Coordinator:**

Martin Milanič

### **Speakers:**

Dušanka Janežič, UP FAMNIT and National Institute of Chemistry in Ljubljana

Marko Orel, UP FAMNIT

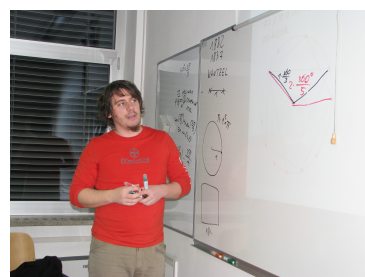
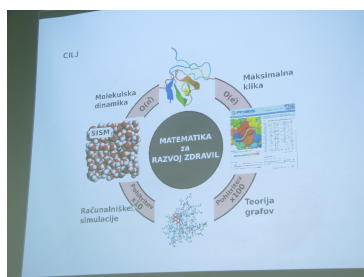
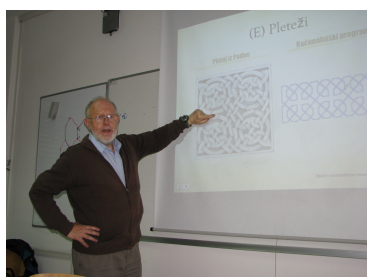
Janez Žibert, UP FAMNIT

Tomaž Pisanski, UL FMF

Gašper Jaklič, UP IAM and UL FMF

Branko Kavšek, UP IAM and UP FAMNIT

Vladimir Batagelj, UL FMF



## **Preparations for the International Mathematical Olympiad, August 30 - September 3, 2012.**

UP FAMNIT and UP PeF (the Faculty of Education) hosted the Mathematical Research Days, which represent the annual preparation for the Mathematical Olympiad and are organized by DMFA Slovenia (the Association of Mathematicians, Physicists and Astronomers of Slovenia). Theoretically and through problem solving the participants discussed the following topics: combinatorics (recursive equation and the principle of extreme elements), geometry (Ptolemy's theorem and inequality), functional equations and polynomials, number theory (the Euclidean algorithm, congruences, Fermat's little theorem) and inequalities.

## **National High School Competition, April 21, 2012.**

The 56th competition in secondary school mathematical knowledge for "Vegova priznanja" took place at Koper secondary school and was attended by 172 students. The event was organized by DMFA Slovenia (the Association of Mathematicians, Physicists and Astronomers), the hosts were UP FAMNIT, UP PeF (the Faculty of Education) and Koper secondary school.

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## VISITING PROFESSORS AND RESEARCHERS IN 2012

- Ancholcer Marcin (Poznan Univeristy of Economics, Poland)
- Boros Endre (Rutgers University, USA)



- Brandstädt Andreas (University of Rostock, Germany)
- Cicalese Ferdinando (University of Salerno, Italy)
- Cichacz-Przeniosło Sylwia (AGH University of Science and Technology, Poland)
- Dobson Edward (Mississippi State University, USA)
- Evdokimov Sergei (V. A. Steklov Institute of Mathematics, Russia)
- Fernández Alcober Gustavo A. (University of the Basque Country, Spain)
- Fowler Patrick William (University of Sheffield, United Kingdom)
- Gangopadhyay Sugata (Indian Institute of Technology, India)
- Grippo Luciano (Universidad Nacional de General Sarmiento, Argentina)
- Heggernes Pinar (University of Bergen, Norway)
- van 't Hof Pim (University of Bergen, Norway)
- Imrich Wilfried (University of Leoben, Austria)
- Ivanov Alexander A. (Imperial College London, United Kingdom)
- Kisdi Eva (University of Helsinki, Finland)
- Kiss György (Eötvös Loránd University, Hungary)
- Ling Chia Gek (University of Malaya, Malaysia)
- Mačaj Martin (Comenius University, Slovakia)
- Martínez Fernández Luis (University of the Basque Country, Spain)
- Nedela Roman (Matej Bel University, Slovakia)
- Safe Martín (Universidad Nacional de General Sarmiento, Argentina)
- Schaudt Oliver (University of Cologne, Germany)



- Spiga Pablo (University of Milano-Bicocca, Italy)
- Szonyi Tamás (Eötvös Loránd University, Hungary)
- Elena Valentinova Konstantinova (Sobolev Institute of Mathematics, Russia)
- Wojda Adam Paweł (AGH University of Science and Technology, Poland)

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## RESEARCH VISITS IN 2012

- Institute of Mathematics of the Academy of Sciences of the Czech Republic, Prague, Czech Republic, January - February;
- University of Western Australia, Perth, Australia, February;
- University of Bergen, Norway, February;
- University of Lethbridge, Alberta, Canada, February;
- University of Trento, Italy, February;
- Université Libre Bruxelles, Belgium, February - March;
- Washington University, St. Louis, Missouri, USA, March;
- Johannes Kepler University, Linz, Austria, March-June;
- Microsoft Research, Redmond, Washington, USA, April;
- RUTCOR, Rutgers University, USA, April;
- University of Pécs, Hungary, April;
- Charles University, Prague, Czech Republic, May;
- University of West Bohemia, Plzen, Czech Republic, May;
- University of Salerno, Italy, May;
- University of Wisconsin - Madison, USA, May;
- University of Helsinki, Finland, June;
- Dresden University of Technology, Germany, June;
- Santa Fe Institute, New Mexico, USA, June;
- University of Niš, Serbia, June;
- University of the Basque Country, Bilbao, Spain, June;
- Centre de Recerca Matemàtica, Barcelona, Spain, June - July;
- Shanxi University Taiyuan, China, September;
- Stellenbosch University, South Africa, October - November;
- University of Buenos Aires, University of General Sarmiento, National University of La Plata, Argentina, October - November;
- Mississippi State University, Starkville, USA, November;



Research visit - Mississippi State University, Starkville, USA

- University of Western Australia, Perth, Australia, November - December;
- Free University of Brussels, Belgium, December;
- Netanya Academic College, Israel, December;
- Beijing Jiaotong University, China, December;
- Moscow State University, Russia, December;
- POSTECH - Pohang University of Science and Technology, S. Korea, December.

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## CONFERENCE ATTENDANCES IN 2012

- Jordan Triple Product Homomorphisms - 40th Winter School in Abstract Analysis, Klenčí pod Čerchovem, Czech Republik, January, active participant;
- Isogeometric Analysis and Applications, Linz, Austria, March, participant;
- SODO 2012 - Symmetries of Discrete Objects, Queenstown, New Zealand, February, invited speaker, 3 active participants;



SODO 2012 - Symmetries of Discrete Objects, Queenstown, New Zealand

- Ischia Group Theory 2012, Ischia, Italy, March, participant;
- Mighty LII The 52<sup>nd</sup> Midwestern Conference on Graph Theory, Indiana State University, Terre Haute, Indiana, USA, April, invited plenary speaker;
- South-Eastern European Digitization Initiative - SEEDI 2012, Ljubljana, Slovenia, May, active participant;
- International Conference on Cycles in Graphs, Nashville, USA, May - June, 2 invited speakers, 3 participants;
- 84th Workshop in General Algebra - AAA84, Dresden, Germany, June, active participant;
- PhD Summer School in Discrete Mathematics, Rogla, Slovenia, June, 17 participants;
- SYGN 2012 - Symmetries of Graphs and Networks III, Rogla, Slovenia, June, 17 participants;
- SIAM Conference on Applied Linear Algebra, Valencia, Spain, June, active participant;
- SIAM Conference on Discrete Mathematics, Dalhousie University, Halifax, Nova Scotia, Canada, June, invited speaker;
- Eighth International Conference on Mathematical Methods for Curves and Surfaces, Oslo, Norway, June-July, 2 active participants;
- CRM Conference on Applications of Graph Spectra in Computer Science, Barcelona, Spain, July, active participant;
- 25th European Conference on Operational Research, Vilnius, Lithuania, July, session chair and active participant;
- Kick-off meeting, 1st NFN seminar, Stift Vorau, Austria, July, active participant;

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- MDA 2012 - Mathematics of Distances and Applications, Varna, Bulgaria, July, 3 invited speakers;
  - Summer School on Symmetries of Combinatorial Objects, Cuernavaca, Mexico, July, invited speaker;
  - Computers in Scientific Discovery 6, Portorož, Slovenia, August, invited speaker, 2 active participants, 13 participants;
  - Eighth International Colloquium on Graphs and Optimization, Leukerbad, Switzerland, August, active participant;
  - The Second Workshop on Abstract Polytopes, Cuernavaca, Mexico, August, participant;
  - 26th Ljubljana-Leoben Graph Theory Seminar 2012, Bovec, Slovenia, September, 3 active participants, 11 participants;
  - ICTP-IPM Conference in Combinatorics and Graph Theory, Trieste, Italy, September, 2 participants;
  - The CLASS Conference 2012, Bled, Slovenia, October, 2 invited speaker, participant;
  - 55th Congress of the South African Mathematical Society - SAMS2012, Stellenbosch, South Africa, November, participant;
  - Impromptu Combinatorics Workshop, Starkville, Mississippi, USA, November, 3 invited speakers;
  - Mini-workshop "Group actions on graphs", Mississippi State University, USA, November, active participant;
  - Com2MaC Workshop on Liftings and related Problems, POSTECH, Pohang, South Korea, December, 2 invited speakers.

## INVITED LECTURES AT RESEARCH INSTITUTES/UNIVERSITIES IN 2012

- University of Bergen, Norway, February;
- University of Lethbridge, Alberta, Canada, February;
- University of Western Australia, Perth, Australia, February;
- Washington University, St. Louis, Missouri, USA, March;
- Humbolt State University, California, USA, April;
- Microsoft Research, Redmond, Washington, USA, April;
- RUTCOR, Rutgers University, USA, April;
- University of Washington, Seattle, USA, April;
- Sapienza University of Rome, Italy, May;
- University of West Bohemia, Plzen, Czech Republic, May;
- Johannes Kepler University, Linz, Austria, May;
- University of Wisconsin - Madison, USA, May;
- University of the Basque Country, Bilbao, Spain, June;
- Mississippi State University, Starkville, USA, November;
- University of General Sarmiento, Argentina, November.



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## PUBLICATIONS 2012 - to date

- AMBROZIE, Calin, BRAČIČ, Janko, KUZMA, Bojan, MÜLLER, Vladimir. The commuting graph of bounded linear operators on a Hilbert space. *J. funct. anal.*, 2013, vol. 264, iss. 4, 1068-1087. [COBISS.SI-ID 16556377]
- ARALUZE, Alexander, KOVÁCS, István, KUTNAR, Klavdija, MARTÍNEZ, Luis, MARUŠIČ, Dragan. Partial sum quadruples and bi-Abelian digraphs. *J. comb. theory. Ser. A*, 2012, vol. 119, iss. 8, 1811-1831. [COBISS.SI-ID 1024426836]
- BERČIČ, Katja, GHASEMI, Mohsen. Tetravalent arc-transitive graphs of order twice a product of two primes. *Discrete math.* [Print ed.], 2012, vol. 312, issue 24, 3643-3648. [COBISS.SI-ID 1024477524]
- BOLDIN, Barbara, KISDI, Éva. On the evolutionary dynamics of pathogens with direct and environmental transmission. *Evolution*, 2012, Vol. 66, iss. 8, 2514-2527. [COBISS.SI-ID 1024420948]
- BRINKMANN, Gunnar, VAN CLEEMPUT, Nico, PISANSKI, Tomaž. Generation of various classes of trivalent graphs. *Theor. comp. sci.*, 2012. [COBISS.SI-ID 16194393]
- CEULEMANS, Arnout, LIJNEN, E., FOWLER, Patrick W., MALLION, Roger B., PISANSKI, Tomaž. Graph theory and the Jahn-Teller theorem. *Proc. - Royal Soc., Math. phys. eng. sci.* [Print ed.], 2012, vol. 468, no. 2140, 971-989. [COBISS.SI-ID 16090457]
- CEULEMANS, Arnout, LIJNEN, E., FOWLER, Patrick W., MALLION, Roger B., PISANSKI, Tomaž.  $S_5$  graphs as model systems for icosahedral Jahn-Teller problems. *Theor. Chem. acc.* (Print), 2012, vol. 131, no. 7, 1246-1255. [COBISS.SI-ID 16411737]
- CICALESE, Ferdinando, MILANIČ, Martin, VACCARO, Ugo. On the approximability and exact algorithms for vector domination and related problems in graphs. *Discrete appl. math.* [Print ed.], 2012, 1-18. [COBISS.SI-ID 1024470868]
- CICALESE, Ferdinando, MILANIČ, Martin. Graphs of separability at most 2. *Discrete appl. math.* [Print ed.], 2012, vol. 160, iss. 6, 685-696. [COBISS.SI-ID 1024310612]
- CVETKO-VAH, Karin, PISANSKI, Tomaž. A census of edge-transitive planar tilings. *JCMCC, J. comb. math. comb. comput.*, 2012, vol. 80, 243-265. [COBISS.SI-ID 16279-897]
- DOBSON, Edward, KOVÁCS, István, MIKLAVIČ, Štefko. The groups of non-edge-transitive rose window graphs. To appear in *Ars. Math. Contemp.*
- DOBSON, Edward, LI, Cai-Heng, and SPIGA, P. Permutation groups containing a regular abelian Hall subgroup, *Communications in Algebra* (PPrint), 2012 Vol. 40, 3532-3539.
- DOBSON, Edward, The full automorphism group of Cayley graphs of  $\mathbb{Z}_p \times \mathbb{Z}_{p^2}$ . *Electron. j. comb.* (On line). [Online ed.], 2012, vol. 19, no. 1, 59-75. [COBISS.SI-ID 1024415828]
- DOLINAR, Gregor, HE, Kan, KUZMA, Bojan, QI, Xiaofei. A note on Jordan derivable linear maps. *Operators and matrices*, 2013, vol. 7, no. 1, 159-165. [COBISS.SI-ID 16396633]
- DOLINAR, Gregor, KUZMA, Bojan, OBLAK, Polona. On maximal distances in a commuting graph. *Electron. j. linear algebra* (On line), 2012, vol. 23, 243-256. [COBISS.SI-ID 16313689]
- DUTOUR SIKIRIČ, Mathieu, KNOR, Martin, POTOČNIK, Primož, ŠIRAN, Jozef, ŠKREKOVSKI, Riste. Hyperbolic analogues of fullerenes on orientable surfaces. *Discrete math.* [Print ed.], 2012, vol. 312, iss. 4, 729-736. [COBISS.SI-ID 16153689]
- EVDOKIMOV, Sergey, KOVÁCS, István, PONOMARENKO, Ilya. Characterization of cyclic Schur groups. To appear in *Algebra and Analysis*.

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- FATH-TABAR, Gholam Hossein, ASHRAFI, Ali Reza, STEVANOVIĆ, Dragan. Spectral properties of fullerenes. *j. comput. theor. nanosci.*, 2012, vol. 9, no. 9, 32-329. [COBISS.SI-ID 1024487252]
  - FENG, Lihua, YU, Guihai, ILIĆ, Aleksandar, STEVANOVIĆ, Dragan. The signless Laplacian spectral radius of graphs on surfaces, *Linear Multilinear Algebra* 61 (2013), 573-581.
  - FRELIH, Boštjan, KUTNAR, Klavdija. Classification of cubic symmetric tetracirculants and pentacirculants. *Eur. j. comb.*, 2013, vol. 34, iss. 2, 169-194. [COBISS.SI-ID 1024446036]
  - FRITZILAS, Epameinondas, MILANIĆ, Martin, MONNOT, Jérôme, RIOS-SOLIS, Yamin A. Resilience and optimization of identifiable bipartite graphs. *Discrete appl. math.* 161 (2013), 593-603. [COBISS.SI-ID 1024406100]
  - GANGOPADHYAY, Sugata, PAŠALIĆ, Enes, STANICA, Pantelimon. A note on generalized bent criteria for Boolean functions. Accepted at *IEEE trans. Info. Th.*
  - GLOVER, Henry, KUTNAR, Klavdija, MALNIČ, Aleksander, MARUŠIČ, Dragan. Hamilton cycles in (2, odd, 3)-Cayley graphs. *Proc. Lond. Math. Soc.*, 2012, vol. 104, no. 6, 1171-1197. [COBISS.SI-ID 1024390740]
  - GRAVNER, Janko, HOLROYD, Alexander E. A sharper threshold for bootstrap percolation in two dimensions. *Probab. theory relat. Fields*, 2012, vol. 153, no. 1-2, 1-23. [COBISS.SI-ID 1024373076]
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## 2012 HIGHLIGHTS OF MATHEMATICIANS AT UP FAMNIT & UP IAM

- **Asoc. Prof. Miklavič Štefko received the Zois Award 2012**

Vice-rector for research and development at University of Primorska, Assoc. prof. Miklavič Štefko, PhD, on Friday 23th November 2012 received the most prestigious “Zois Award” for scientific achievements in the field of mathematics. “Zois Award” recognition represents the most prestigious and top award for achievements in scientific research and development in the Republic of Slovenia. Researchers are awarded for achievements and their permanent contribution to the development of science in country.



- **Asoc. Prof. Kuzma Bojan received the Golden Plaque of UP**

The Golden Plaque of UP is conferred to professors, teaching assistants and researchers of UP for their achievements and lasting contribution to scientific, artistic and educational activities at UP, and for contribution to strengthening the university's reputation, visibility and credibility.



- **Assis. Prof. Milanič Martin was awarded the UP Research Excellence Prize**

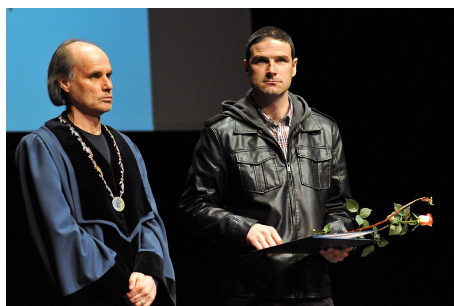
The UP Research Excellence Prize is designed to promote the achievements of professors, teaching assistants and researchers of UP for their research excellence.



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- **M.Sc. Frelih Boštjan was awarded the UP Teaching Excellence Prize**

The UP Teaching Excellence Prize is designed to promote the achievements of professors, teaching assistants and researchers of UP for their teaching excellence.



- **Student Cepak Nastja received the Srečko Kosovel Prize for students of UP**

The Srečko Kosovel Prize for students of UP receives a student for the best scientific research or artistic achievements in the preparation of the diploma, master's or doctoral thesis in the previous academic year, and with its above-average achievements contributes to the establishment of the university.



- **Muršič Peter, who has Master's Degree in Mathematics from UP FAMNIT, is enrolled at Rutgers University**

Muršič Peter is a graduate of the first generation undergraduate students of mathematics at the UP FAMNIT. After completing undergraduate degree he enrolled in Master's study of Mathematical Sciences and in 2012 received his Master's Degree in Mathematics. Since September 2012 he started as a PhD student at Rutgers University and he is awarded scholarship from them.



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- **UP FAMNIT enrolled excellent foreign students**

UP FAMNIT from year to year increases the number of excellent foreign students. They come from Belgium, Belarus, Bosnia and Herzegovina, Croatia, Italy, Macedonia, Mexico, Montenegro, Poland, Russia, Serbia and Ukraine. In this 2012/13 academic year FAMNIT enrolled six foreign students with excellent results in national and international mathematics competitions in an undergraduate study programme.



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## 2013 Math Meetings/Workshops organized by Math Department at UP FAMNIT & UP IAM

- **ATCAGC 2013: Algebraic, Topological and Complexity Aspects of Graph Covers, January 28 - February 1.**

This is the fifth workshop in ATCAGC series. The main topic is graph coverings and their applications in different areas of mathematics such as algebraic graph theory, models of computation, computational complexity and others. The aim of the workshop is to bring together researchers working on these diverse ends of graph coverings, to introduce their approaches and results to one another, and to try to continue joint research combining these areas. This year, special emphasis will be given to students who have recently completed, or are about to defend their PhD theses in 2013.

More: <http://www.famnit.upr.si/sl/konference>

- **CSASC 2013: Joint Mathematical Conference, June 9 - 13.**

Catalan Mathematical Society, Slovenian Mathematical Society, Austrian Mathematical Society, Slovak Mathematical Society, and Czech Mathematical Society.

More: <http://www.famnit.upr.si/sl/konference>

- **2013 PhD Summer School in Discrete Mathematics, June 16 - 21.**

The Summer School will consist of three minicourses (of six hours each): *Graph Symmetries*, led by Marston Conder (University of Auckland, New Zealand); *Imprimitive Permutation Groups*, led by Edward T. Dobson, (Mississippi State University, USA & UP, Slovenia); *Leonard pairs and the  $q$ -Racah polynomials*, led by Tatsuro Ito, (Kanazawa University, Japan).

More: <http://www.famnit.upr.si/sl/konference>

- **Conference on Geometry: Theory and Applications, June 24 - 28.**

*Invited Speakers:* Carlotta Giannelli (JKU Linz, Austria); Kai Hormann (University of Lugano, Switzerland); Jiří Kosinka (Rainbow Research Group, Cambridge, United Kingdom); Josef Schicho (RICAM, Linz, Austria); Tamás Várady (BME, Budapest, Hungary).

More: <http://www.famnit.upr.si/sl/konference>

- **Famnit Summer Math Camp “Mathematics is Cool”, August.**

The camp intended for pupils in the last three years of primary schools and for those in secondary schools that are interested in mathematics. The camp includes lectures and workshops on various mathematical topics and numerous social activities. We wish to show that mathematics can be both fun and useful.

More: <http://tabor.famnit.upr.si/>

- **Famnit Summer School of Mathematical Finance, August.**

The school is intended for pupils in their fourth year of secondary school and for university students who are interested in mathematical finance and the broader socio-philosophical context of financial and economic analysis.

More: <http://poletna-sola.si/>

- **Famnit Excursions into the Mathematical Universe, once a month.**

A series of popular lectures on mathematics and its role in the modern world running for the fourth consecutive year in the 2012/2013 academic year.

More: <http://matematicni-izleti.famnit.upr.si/sl/>

- **Research Mathematical Seminar, each Monday.**

More: <http://www.famnit.upr.si/sl/seminars>





