Newsletter 36 of EUROPT

EUROPT - The Continuous Optimization Working Group of EURO

http://europt.iam.metu.edu.tr/

October 2016

In this issue:

Words from the Chair

Dear Colleagues,

On behalf of the EUROPT Managing Board let me welcome you to the 36th EUROPT Newsletter.

Recently elections of EUROPT Managing Board took place. Let me welcome the new elected members Giancarlo Bigi, Edmondo Minisci, and Fabio Schoen, and congratulate them together with the staying members of the board for the support received from the EUROPT community. We discussed and distributed among ourselves the roles, please find the composition in the newsletter and our homepage.

Our annual EUROPT workshop took place in Warsaw, I enjoyed very much meeting many of you there. The report of the workshop may be found in the previous issue of the Newsletter as well as the Laudatio for Yaroslav Sergeyev who was awarded EUROPT Fellow 2016 during the workshop. We are very grateful for the nominations received and we hope to receive your nominations for the next EUROPT Fellow. Please find the call in this Newsletter. Please look at the nomination criteria in the call and send your nomination letters of no more than two pages describing on how these criteria are met together with a short CV of the candidate to me by January 31.

There will be no EURO Conference in 2017 since the triannual IFORS conference will take place. Following the tradition of our workshops to be held close to EURO and IFORS conferences, the next EUROPT Workshop will be in Montreal, Canada, just before the IFORS conference 2017 in Quebec. This is the second time the EUROPT Workshop is organized outside Europe, the EUROPT Workshop 2011 was held in Ballarat, Australia. Please find the announcement of the EUROPT Workshop 2017 in the Newsletter as well as some other announcements. Enjoy reading the Newsletter.

Julius Žilinskas, Chair, EUROPT Managing Board

Vilnius University, Lithuania
julius.zilinskas@mii.vu.lt

Elections of the EUROPT Managing Board

Dear EUROPT Members,

Thank you very much for taking part in elections for the EUROPT Managing Board! The results of the election are the following EUROPT MB:

- **Giancarlo Bigi**, University of Pisa
- **Sonia Cafieri**, ENAC, University of Toulouse
- **Andreas Grothey**, University of Edinburgh
- **Dmitri Kvasov**, University of Calabria
- **Edmondo Minisci**, University of Strathclyde
- **Fabio Schoen**, University of Florence
- **Julius Zilinskas**, Vilnius University

The term of this board will be July 2016 - June 2018.

The roles have been distributed as follows among the MB members:

- Julius Žilinskas, chair
- Giancarlo Bigi, website editor
- Sonia Cafieri, newsletter editor
- Andreas Grothey, treasurer
- Dmitri Kvasov, events coordinator
- Edmondo Minisci, communications coordinator
- Fabio Schoen, relations coordinator

We will try our best to continue the success of EUROPT working group.

EUROPT fellow 2017 - call for nominations

EUROPT honors outstanding researchers in continuous optimization by awarding the EUROPT Fellowship. The Fellowship is presented to the awarded researcher annually, at the EUROPT Workshop. The Fellow is invited to present the EUROPT Fellow Lecture as a plenary talk at the Workshop.

Each EUROPT member is eligible to nominate candidates for the Fellowship. The nomination must include a nomination letter of no more than two pages and a short CV of the candidate. The nomination material must be sent in electronic form to the current Chair of the EUROPT Managing Board no later than January 31 in the year when the Fellowship will be awarded.

The EUROPT Managing Board serves as selection committee. Based on the nominations and the resulting votes, the selection committee chooses the EUROPT Fellow.

To be nominated as EUROPT Fellow, a researcher must satisfy one or both of the following criteria:

1. Outstanding scientific contributions to continuous optimization, such as original theoretical results, innovative applications, and/or successful software development.

2. Outstanding administrative contributions to the continuous optimization community, in particular to EUROPT, such as organizing conferences, special issues, and serving at editorial boards of international scientific journals.

Members of EUROPT MBs as well as honorary chairs are not eligible to be nominated.

The photo gallery of all previous EUROPT Fellows is presented at the EUROPT web page http://europt.iam.metu.edu.tr/.

Please send your nominations to julius.zilinskas@mii.vu.lt by January 31, 2017.

Forthcoming Events

15th EUROPT Workshop on Advances in Continuous Optimization
Montréal, July 12-14, 2017

https://www.gerad.ca/colloques/europt2017/

About the Workshop

The EUROPT Workshop on Advances in Continuous Optimization is the annual event of the EUROPT continuous optimization working group of EURO (The Association of European Operational Research Societies). This 15th edition will take place in Montreal on July 12-14, 2017, just before the 21st IFORS conference that will be held in Quebec City.

The workshop will take place during Montreal's 375th anniversary celebrations. Activities and special events are advertised at http://www.375mtl.com/en/.

Plenary Speakers

- Shabbir Ahmed (Georgia Institute of Technology, U.S.A.)
- Timothy C.Y. Chan (University of Toronto, Canada)
- Francisco Facchinei (University of Rome La Sapienza, Italy)

Special Sessions In Memoriam

The scientific program will include special sessions in memory of Jonathan M. Borwein, Roger Fletcher, and Christodoulos A. Floudas.

Scope of the Workshop

The scope of the workshop includes (but is not restricted to) the following areas:

- Linear and nonlinear optimization
- Large-scale optimization
- Multi-objective optimization
- Mixed integer nonlinear optimization
- Robust optimization and applications

- Derivative-free optimization
- Semi-infinite optimization
- Global optimization
- Stochastic optimization
- Complementarity and variational problems
- Optimal control and applications
- Optimization in data mining
- Conic and semidefinite optimization
- Optimization in industry, business and finance
- Complexity and efficiency of optimization algorithms
- Analysis and engineering of optimization algorithms
- Convex and non-smooth optimization

Important Dates

Early bird registration deadline: May 1st, 2017
Abstract submission deadline: March 15, 2017
Abstract acceptance: March 31, 2017
Workshop: July 12-14, 2017

Registration

Before May 1st, 2017: 200$ (students: 150$)
After May 1st, 2017: 250$ (students: 180$)

Abstract Submission

Abstracts are submitted online at   https://symposia.gerad.ca/europt2017/en/submit

Program Committee

- Miguel Anjos (Polytechnique Montréal, Canada), Chair
- Immanuel Bomze (U. Vienna, Austria)
- Hande Benson (Drexel U., USA)
- Giancarlo Bigi (U. Pisa, Italy)
- Luce Brotcorne (Inria, France)
- Sonia Cafieri (ENAC, France)
- Erick Delage (HEC Montréal, Canada)
- Gabriele Eichfelder (TU Ilmenau, Germany)
- Jacek Gondzio (U. Edinburgh, UK)
- Serge Gratton (CERFACS, France)
- Andreas Grothey (Edinburgh, UK)
- Warren Hare (UBC, Canada)

- Tim Hoheisel (McGill U., Canada)
- Dmitri Kvasov (U. Calabria, Italy)
- Simon Lacoste-Julien (U. Montréal, Canada)
- Sven Leyffer (Argonne, USA)
- Patrice Marcotte (U. Montréal, Canada)
- Edmondo Minisci (U. Strathclyde, UK)
- Ruth Misener (Imperial College, UK)
- Wlodzimierz Ogryczak (Warsaw U. Tech., Poland)
- Dominique Orban (Polytechnique Montréal, Canada)
- Laura Palagi (U. Roma Sapienza, Italy)
- Francesco Rinaldi (U. Padova, Italy)
- Fabio Schoen (U. Firenze, Italy)
- Tatiana Tchemisova (U. Aveiro, Portugal)
- Tamás Terlaky (Lehigh U., USA)
- Gerhard-Wilhelm Weber (METU, Turkey)
- Henry Wolkowicz (U. Waterloo, Canada)
- Julius Zilinskas (Vilnius U., Lithuania)

Organizing Committee

- Miguel Anjos, Polytechnique Montréal
- Sébastien Le Digabel, Polytechnique Montréal, Chair
- Fabian Bastin, Université de Montréal
- Andrea Lodi, Polytechnique Montréal

Contact

email: europt2017@gerad.ca

Venue

HEC Montréal
Tata communications room (for registration)
3000 chemin de la Côte-Sainte-Catherine, Montréal (Québec) Canada H3T 2A7

Sessions on Uncertainty based Optimization in Engineering at the 15th EUROPT Workshop

Scope and Motivations

In an expanding world with limited resources and increasing uncertainty, optimization and uncertainty quantification become a necessity. Optimization can turn a problem into a solution, thus the main focus of this session is to promote the knowledge exchange on new approaches to treat uncertainty in complex engineering systems and use novel optimization techniques to efficiently deal with large scale problems with many objectives and uncertain quantities. It is generally recognised, in fact, that neglecting the impact of uncertainty on the design of any system or process can lead to unreliable design solutions. Common approaches that make use of safety margins to account for uncertainty in design and manufacturing are not adequate to fully capture the growing complexity of engineering systems and provide reliable, resilient and optimal solutions.

Topics

The sessions are open to everybody who wants to present recent and original results on any of the following topics:
- Robust Optimization
- Reliability based Design Optimization
- Resilience based Design Optimization
- Evolvable Optimization Under Uncertainty
- Uncertainty based Multidisciplinary Design Optimization

with applications to any engineering areas, in particular:

- Aeronautics, Aerospace, and Space
- Agriculture and Precision Farming
- Automotive
- Bio-Engineering
- Civil and Structural Engineering
- Electronics
- Energy, including Renewable Energy
- Offshores, Coastal and Marine Engineering and Operations
- Transport and Logistics
- Turbomachinery

Session Organisers

Edmondo Minisci, edmondo.minisci@strath.ac.uk
Annalisa Riccardi, annalisa.riccardi@strath.ac.uk
Massimiliano Vasile, massimiliano.vasile@strath.ac.uk

Task Force in Computational Intelligence in Aerospace Sciences, Department of Mechanical & Aerospace Engineering, University of Strathclyde, Glasgow, UK

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VOCAL Optimization Conference
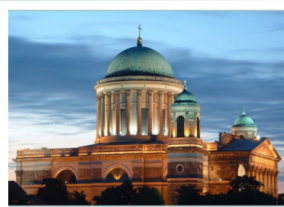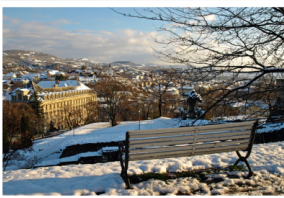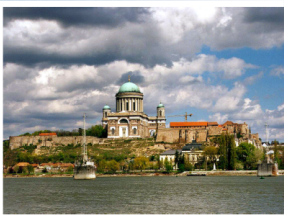## Esztergom, December 12-15, 2016

http://vocal.p-graph.org

VOCAL — Optimization Conference: Advanced Algorithms

CALL FOR PARTICIPATION

VOCAL Optimization Conference: Advanced Algorithms
(VOCAL 2016)
December 12-15, Esztergom, Hungary
St. Adalbert Conference Center

The VOCAL Optimization Conference: Advanced Algorithms will be held at St. Adalbert Conference Center, Esztergom, Hungary, December 12-16, 2016. The conference will be organized by the Faculty of Information Technology and Bionics, Pázmány Péter Catholic University and the Hungarian Operations Research Society.

SCOPE

The VOCAL conference focuses on recent advances on optimization algorithms: continuous and discrete; complexity and convergence properties, high performance optimization software and novel applications are reviewed as well. We aim to bring together researchers from both the theoretical and applied communities in the framework of a medium-scale event.

CONFIRMED INVITED SPEAKERS INCLUDE

Yves Crama, University of Liege, Liege, Belgium
John Hooker, Carnegie Mellon University, Pittsburgh, USA
Shmuel Onn, Technion, Haifa, Israel
Franz Rendl, University of Klagenfurt, Klagenfurt, Austria
Robert Weismantel, ETH, Zurich, Switzerland
Ramin Zabih, Cornell University, USA

CONTRIBUTED TALKS

Each accepted paper will be allotted to a 25 minute talk.
Authors wishing to speak should submit an abstract via the conference WEB page by October 31, 2016.

PUBLICATION IN SPECAL ISSUE OF CEJOR

Selected papers presented at VOCAL 2016 will be published in a special issue of the journal Central European Journal of Operations Research.
All papers will be refereed according to the standards of the journal.

IMPORTANT DATES

Deadline for abstract submission: October 31, 2016
Notification of acceptance: from October 15, 2016
Deadline for early registration: November 15, 2016
Deadline for on-line registration: November 30, 2016
Conference begins on December 12 and ends on December 15, 2016
Deadline for submitting papers to the special issue of CEJOR: February 28, 2017

On behalf of the Organizing Committee
Endre Boros, Endre.Boros@rutgers.edu (Chair, Rutgers University, USA)
Please send enquiries to: Zoltan Sule, vocal@p-graph.org (University of Pannonia)
Further information is available at: http://vocal.p-graph.org

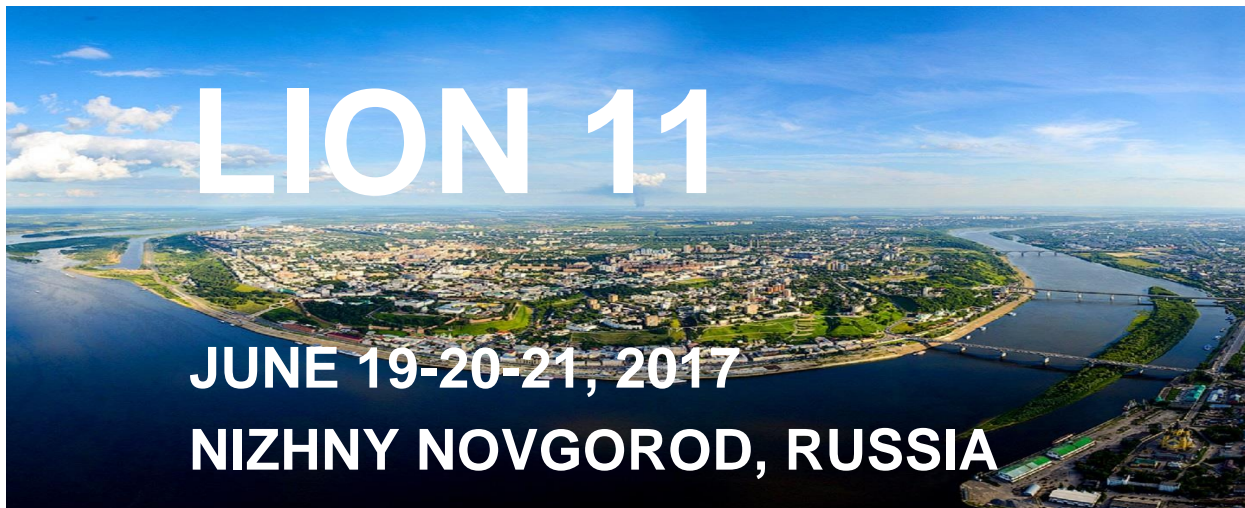## VOCAL — http://vocal.p-graph.org

LION 11, the Learning and Intelligent Optimization Conference
Nizhny Novgorod, June 19-21, 2017

http://intelligent-optimization.org/lion11/

LION 11

JUNE 19-20-21, 2017

NIZHNY NOVGOROD, RUSSIA

LION11, the 11th **Learning and Intelligent Optimization Conference**, explores the intersections and uncharted territories between machine learning, artificial intelligence, mathematical programming and algorithms for hard optimization problems. In addition to scientific papers:

- **Contests** in continuous and discrete optimization.
- Sessions dedicated to **commercial software and open source initiatives**.
- **Parallel computing, supercomputing, and cloud** for "big optimization".
- **Elevator pitches** about new and crazy ideas (also by PhD students).
- **Tutorials** about methods and software.

Conference proceedings published by **Springer-Verlag**. Colocated with Net2017, which takes place in the following dates: June 22-23-24, 2017.

Dec 10, 2016 paper submission deadline.

General chair: Yaroslav Sergeyev. Local organization committee: Roman Strongin (Chair), Victor Gergel (Vice-Chair), Vladimir Grishagin, Konstantin Barkalov, Dmitri Kvasov. Steering committee: Roberto Battiti (head), Holger Hoos, Youssef Hamadi, Mauro Brunato, Thomas Stuetzle, Christian Blum, Martin Charles Golumbic, Marc Schoenauer, Xin Yao, Benjamin W. Wah.

Detailed and updated info at:

http://intelligent-optimization.org/lion11/

Report of ICOTA 10:
A window for research and development

The 10th International Conference on Optimization: Techniques and Applications or ICOTA 10 / ICOTA 2016 was held at the Soyombo Hall of the Best Western Premier Tuushin Hotel in Ulaanbaatar, Mongolia last July 23-26, 2016. The conference aimed to provide a forum for scientists, researchers, software developers, and practitioners to exchange ideas and approaches, to present research findings and state-of-the-art solutions, to share experiences on potentials and limits, and to open new avenues of research and developments on all issues and topics related to optimization and its applications.

The conference had parallel sessions on the following topics: Linear and Non-linear Programming, Combinatorial Optimization and Integer Programming, Conic Optimization, Equilibrium Problems, Global Optimization, Non-smooth Optimization, Stochastic Programming and Dynamic Programming, Multi-objective Optimization, Heuristic Methods, Optimal Control, Applications of Mathematical Modeling and Optimization Theory and Methods in Various Areas, Optimization in Management Science, Statistics and Optimization and Optimization and its Applications. These different sessions took place at the Building C of the University of Humanities. There were 120 papers presented aside from the poster presentations of researchers from 25 different countries.

Highlights of the conference included the Plenary Lectures of Prof. Shu-Cheng Fang (North Carolina State University, USA) on Linear Reformulation of Polynomial Discrete Programming for Fast Computation; Prof. Panos Pardalos (University of Florida, USA) on A New Information Theory Perspective on Network Robustness; Prof. Akiko Yoshise (University of Tsukuba, Japan) on Some Tractable Subcones for Testing Copositivity; Prof. Alexander Strekalovskiy (Matrosov Institute for Systems Dynamics and Control Theory of Siberian Branch of RAS, Russian Federation) on Global Search Theory on Nonconvex Optimization; Prof. Frank Lewis (University of Texas at Arlington, USA); and Prof. Joydeep Dutta (Indian Institute of Technology, Kanpur, India).

ICOTA is one of the official conference series of POP, Pacific Optimization Research Activity Group. The Organizing Committee was spearheaded by Prof. Enkhbat Rentsen and Prof. Altannar Chinchuluun of the National University of Mongolia, and Prof. Altangerel LKhamsuren of the German-Mongolian Institute for Resources and Technology while the Steering Committee was led by Prof. Kok Lay Teo of Curtin University, Australia.

Prof. Gerhard-Wilhelm Weber (Willi) of the Middle East Technical University (METU), a member of the POP Working Committee and responsible for the liaison with Europe and Africa, served as a member of the ICOTA 2016 International Program Committee. Unfortunately, for some short-term developments he faced before the start of the ICOTA conference, he had to cancel his travel to Mongolia but stayed in close contact with the organizers. Prof. Milagros Baldemor (Mila) of DMMMSU, Philippines, kindly accepted to give his scientific talk upon his

request, chaired a session in the conference and introduced the future conferences - IFORS (to be held in Quebec City, Canada in 2017) and EURO (to be held in Valencia, Spain in 2018), in his behalf. Willi was very grateful to the conference organizers for the kind understanding and support given to both of them and for their sincere friendship at EURO.

The participants had positive feedbacks and comments regarding the organization of the conference, the lectures and the research presentations. Furthermore, they were given the chance to explore the different beautiful tourist spots of Mongolia and the countryside. One of the things they enjoyed most was the Mongolian food served to them during their tour. It was a nice experience for them to learn a lot from the conference and to meet other research enthusiasts from the different parts of the world.

The Conference was prepared and conducted very successfully. Every participant enjoyed ICOTA 2016 thoroughly at both personal and professional levels. It was the largest Conference that ever took place in Mongolia. The interviews were broadcasted nationally in Mongolia.

From left to right: Prof. Altannar Chinchuluun, Prof. Kok Lay Teo
and Prof. Enkhbat Rentsen, together with author Mila.

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NACO Special Issue related to 12th International Conference on Industrial Engineering (ICIE 2016), Tehran, Iran

Guest Editors: Prof. Gerhard-Wilhelm Weber, Middle East Technical University, Turkey
Assoc. Prof. A. Mirzazadeh, Kharazmi University, Iran

There will be a SPECIAL ISSUE of the journal *Numerical Algebra, Control and Optimization* (NACO), which is covered in Scopus, related to the 12th International Conference on Industrial Engineering (ICIE 2016; http://www.iiec2016.com). The overall aim of this special issue is to collect the latest researches and trends in the fields of Industrial Engineering and Operational Research; therefore, we invite participants of ICIE 2016 especially, but others are welcome to submit, too.

Submission Information

Topics of interest

Manuscripts submitted to this Special Issue should be original, unpublished, and not currently under consideration for publication elsewhere and should present novel in-depth fundamental research contributions either from a methodological perspective or from an application point of view. Quality and originality of the contribution are the main acceptance criteria. Proposed submissions should include following topics:

- Optimization (models and algorithms)
- Decision making under uncertainty
- Production and inventory management
- Quality engineering/management and productivity
- OR in logistics and supply chain management
- Financial engineering/management and economic analysis
- Firm management systems
- Healthcare systems engineering
- Maintenance and reliability
- Project control and management
- Application of information technology in decision making and firm management
- Design of service, manufacturing and automation systems
- Safety engineering and ergonomics and industry-specific case studies (e.g., on oil and gas, energy, automobiles)

Submission of manuscripts

Manuscripts should be submitted in PDF format or PS (less than 2Mb) via email to a.mirzazadeh@aut.ac.ir. Authors should follow guidelines available at the NACO journal website via link below:

https://aimsciences.org/journals/JournalGuide4Authors.jsp?journalID=22

Important dates

Submission deadline: October 15, 2016 $\rightarrow$ extended to November 25, 2016
Notification of the final decision: April 1, 2017

Howard Rosenbrock Prize 2015

Dear colleagues,

The Howard Rosenbrock Prize is awarded each year for the best paper in Optimization and Engineering (OPTE), a Springer journal that promotes the advancement of optimization methods and the innovative application of optimization in engineering. The prize is named after Howard Rosenbrock, a pioneer of modern control theory and practice who embodied the bridging of the gap between optimization and engineering that is OPTE's raison d'être.

The recipients for 2015 are Moritz Simon and Michael Ulbrich of the Department of Mathematics, Technische Universität München. Their awarded article is entitled "Adjoint based optimal control of partially miscible two-phase flow in porous media with applications to CO2 sequestration in underground reservoirs":

http://link.springer.com/article/10.1007/s11081-014-9270-x

The formal announcement of the prize is published in the latest issue of OPTE:

http://link.springer.com/article/10.1007/s11081-014-9270-x

Congratulations to Moritz and Michael!

Both links above are free of access for two months. Please take advantage of this opportunity.

Miguel Anjos
Editor-in-Chief, Optimization and Engineering
https://www.optejournal.com/

IFORS Developing Countries OR Resources Website

This IFORS activity is supported by EURO WG ORD which is a "daughter" of EUROPT. That collaboration has become a fruitful and classical connection in recent years.

"Free" - not copy-right protected - contributions with Continuous Optimization to the IFORS DC online resources are very much welcome.

Contacts

EUROPT: http://europt.iam.metu.edu.tr/

People wishing to send a message to the EUROPT mailing list should contact our web administrator Semih Kuter `semihkuter@yahoo.com`. The message will then be distributed upon approval by the EUROPT Managing Board.

For specific questions, the members of the Managing Board can be contacted:

- Julius Žilinskas, chair `julius.zilinskas@mii.vu.lt`
- Giancarlo Bigi, website editor `giancarlo.bigi@unipi.it`
- Sonia Cafieri, newsletter editor `sonia.cafieri@enac.fr`
- Edmondo Minisci, communications coordinator `edmondo.minisci@strath.ac.uk`
- Dmitri Kvasov, events coordinator `kvadim@si.dimes.unical.it`
- Fabio Schoen, relations coordinator `fabio.schoen@unifi.it`
- Andreas Grothey, treasurer `A.Grothey@ed.ac.uk`

Editor's notes

Dear members of EUROPT, dear readers,

The new EUROPT Managing Board has recently been elected for the term July 2016 - June 2018. I am honored to still be part of this board and to continue having the responsibility of the Newsletter edition. Our Newsletter will continue the tradition of contributing to share informations that are valuable for our community. I would like to encourage, as always, all the readers to contribute.

The present issue introduces the new Managing Board. It also reports a number of informations, including the announcements of forthcoming events, among which the next EUROPT Workshop.

As members of the new Managing Board, we all will try to do our best to continue the success of EUROPT working group. I am sure that the Newsletter will benefit of our certainly fruitful collaboration.

The Newsletter Editor

Sonia Cafieri
ENAC, University of Toulouse, France
sonia.cafieri@enac.fr