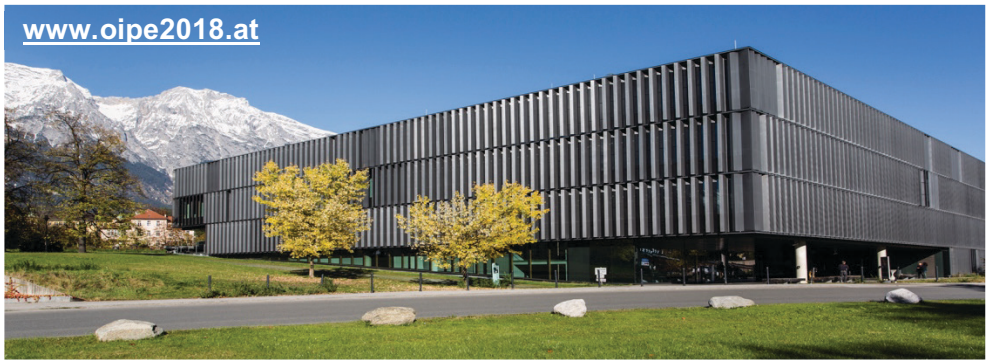
15th International Workshop on Optimization and Inverse Problems in Electromagnetism
September 11 – 13, 2018
Hall in Tirol / Innsbruck, Austria



Dear Colleagues,

on behalf of the organization committee, we are pleased to announce that the 15th International Workshop on Optimization and Inverse Problems in Electromagnetism will be held on **September 11 – 13, 2018, in Hall in Tirol, Austria**.

The workshop will be organized by the Institute of Electrical and Biomedical Engineering, Department of Biomedical Computer Sciences and Mechatronics of the UMIT – Private University for Health Sciences, Medical Informatics and Technology, in collaboration with the Department of Mechatronics and the Department of Mathematics of the University of Innsbruck.

The aim of this workshop is to discuss and share recent developments in optimization and inverse methodologies and their applications to the design and working principle of electromagnetic devices. It will also provide an opportunity to meet experts working in several cutting-edge research fields in engineering, mathematics and physics, in the general framework of the innovation in electromagnetics methods and applications. The conference program will consist of invited lectures, oral presentations and poster sessions. Furthermore, we proudly announce that the **IET SMT award for best paper presented by a young researcher** will be conferred within OIPE 2018.

Hall in Tirol is a vibrant small town full of vitality where you can experience varied shopping facilities and classy hospitality amidst buildings rich in history. You will get to see one of Tirol's most scenic towns with a lovingly restored historical center, ranking among Austria's best preserved. Only a stone's throw away, Innsbruck, the "capital of the alps" delights with its unique wealth of wonderful attractions between 574 and 2,350 meters above sea level. Nowhere else are alpine experiences and urban 'joie de vivre' so closely connected.

We invite members of the scientific community in universities, research centres and industry to attend the workshop and present their recent achievements.

We are looking forward to meeting you all in Hall in Tirol at the OIPE 2018!

Prof. Dr. Daniel Baumgarten
Chairman OIPE 2018

Chairman

Prof. Dr. Daniel Baumgarten

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Contact

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Conference Website

www.oipe2018.at

Scientific Topics

Theoretical aspects and fundamentals
mathematical theory and formulation of inverse and optimization problems; regularization techniques; (model) order reduction; identification problems; sensitivity analysis; new approaches

Algorithms
reconstruction techniques; deterministic, stochastic and hybrid techniques; multi-objective and multi-level optimization; heuristic approaches; design of experiments; constraints; robust optimization under uncertainty; objective functions and direct problems; numerical efficiency; numerical problems; new techniques

Applications
biomedical engineering; control systems; coupled problems; electrical machines; industrial and biomedical tomography; information and communication systems; large scale systems; mechatronics; micro- and nanosystems; non-destructive evaluation; optimal design in electrical and electronic engineering; sensors and actuators; smart grids; smart home; transportation and mobility; other applications

Software methodologies
parallel and distributed computing, GPU; soft computing and artificial intelligence; new methodologies

Plenary Talks

Richard G. Baraniuk (Rice University, Houston, USA)

Josep M. Guerrero (Aalborg University, Denmark)

Mini Symposium: *Computational Electromagnetics: State-of-the-Art and Future Developments*, organized by **Markus Clemens** (University of Wuppertal, GER)

Digest Submission

Authors are encouraged to submit a two-page digest due by ~~April 29th, 2018~~ **May 14, 2018**. A template of the digest is available on the workshop website.
Digest submission: www.oipe2018.at/
All contributed papers will undergo a peer reviewing procedure to determine their suitability for presentation. Notification of the acceptance of the contribution will be given on June 15, 2018. Digests of contributions included in the workshop program will be part of the workshop proceedings.

Publications

Authors of accepted contributions are invited to submit a full paper that will be considered for publication in COMPEL, IJAEM or BMT journal, depending on the content. Detailed information regarding the full paper submission can be found on the website. The submission deadline will be September 17, 2018.

Workshop Registration Fees

	Early	Regular
Regular	400 €	450 €
Student	200 €	250 €
Accompanying Person	150 €	200 €

Registration opening will be announced on the conference website. Early bird registration will be open until **July 2, 2018**.

Important Dates

Digest submission (2 pages):	~~April 29, 2018~~ **May 14, 2018**
Notification of acceptance:	June 15, 2018
Early bird registration:	July 2, 2018
Doctoral course:	September 10, 2018
Begin of workshop:	September 11, 2018
Full paper submission:	September 17, 2018

Doctoral Course

Prior to the workshop, a one day doctoral course is organized. International experts will teach PhD students and researchers entering the field in selected aspects:

- Recent Developments in Optimization for Electromagnetism - **Raffaele Martone**
- Modern Regularization Tools for Solving Inverse Problems - **Markus Haltmeier**
- Computational Electromagnetics - Basics, Methods and Applications - **Markus Clemens**

For more information, see the website
www.oipe2018.at