InSight

Election of ESMI Council

All in all about 60% of the ESMI members casted their votes

THANKS to all of you who participated in the ESMI Council elections 2012. The elections ended beginning of March: almost the entire candidates received the same votes. As it is in the interest of the society to represent the entire field of MI especially within this decisive and labour-intensive period of structuring and extending the ESMI’s scope it has been agreed upon to include all the nominated candidates in the Council. There is a lot to do and we are more than happy to rely on their expertise and their commitment.

Elected Council members

The Council members define the structure of the society; they should attract scientists to make the ESMI their home for their research activities and to foster interdisciplinary knowledge exchange. The Council members should oversee and develop the main orientations of the society in both ways: scientific and management. The Council consists of the Executive Committee – President Clemens W.G.M. Löwik, Vice President Silvio Aime, Secretary Annemie van der Linden, Treasurer Bernd Pichler, and the Past President Andreas Jacobs as well as the elected members. The elected members stay in office for two years.

Kevin Brindle Cambridge Michal Neeman Rehovot
Emmanuelle Canet Lyon Klaas Nicolay Eindhoven
Florence Gazeau Paris Vasilis Ntziachristos Munich
Mathias Hoehn Cologne Jorge Ripoll Heraklion
Fabian Kiessling Aachen Markus Rudin Zürich
Johani Knuuti Turku Michael Schaefers Muenster
Kai Licha Berlin Markus Schwaiger Munich
Adriana Maggi Milan Gooitzen van Dam Groningen
Chrit Moonen Utrecht Juan Luis Vaquero Madrid

Learn more about the ESMI Council members – their motivation and field of expertise – just go to www.e-smi.eu
The societies’ PhD Award for excellent PhD thesis is offered for the purpose of encouraging and rewarding outstanding research in the broad field of MI conducted by our young members. We are happy to support and to dignify the efforts of our young members by raising awareness for their work and to acknowledge their contribution to the interdisciplinary research field of Molecular Imaging. We would like to invite all young scientists working in the broad field of Molecular Imaging to apply for an ESMI PhD Award for an excellent PhD thesis!

Applications can be submitted throughout the year. To ensure a competitive momentum there are four collection dates per year: end of March, end of June, end of September, and end of December. With that all applications submitted e.g. between April and June will compete.

Award Committee
- Annemie vander Linden, Antwerp
- Fabian Kiessling - Aachen
- Chrit Moonen, Utrecht
- Michal Neeman - Rehovot

Successful candidates
- you will be acknowledged at the ESMI website and within the newsletter
- the abstract of your thesis will be published within the newsletter and at the societie’s website
- your excellent work will be acknowledged with 500€
- one year ESMI membership incl. subscription to the MIB journal
- at the end of each year the best thesis of the year will be awarded

Looking forward to your application and to learn more about your excellent work!

Read more about the eligibility criteria and application procedure at www.e-smi.eu

ESMI membership We need you!

Your benefits
- Subscription to the “Molecular Imaging and Biology Journal - MIB”
- Reduced registration fee for our annual European Molecular Imaging Meeting - EMIM
- Reduced registration fee for our ESMI Winter Conference - TOPIM
- Reduced registration fee for the World Molecular Imaging Congress - WMIC
- You can apply for the ESMI PhD Award for excellent PhD thesis (for educational members only)
- Quarterly ESMI e-newsletter
- Possibility to publish and disseminate your recent publications within the addendum to the newsletter
- The right to vote in the annual elections
- Publication of your job vacancies, meetings, workshops at www.e-smi.eu
- active participation in the scientific structuring of the European MI community - be involved in establishing new study groups, how can we foster interdisciplinary exchange [...]
Every **four years** the World Molecular Imaging Congress – WMIC takes place in Europe. This year we will meet in Dublin. Our own congress, the EMIM will therefore be part of the WMIC 2012.

**NEW** Submit your abstract

**late breaking news abstract deadline: 16 July 2012**

submission is possible via [www.wmicmeeting.org](http://www.wmicmeeting.org)

### Programme

ESMI Treasurer Bernd Pichler is the Programme Chair of this year’s congress

**Plenary Speakers**

**Michal Neeman** - Rehovot, Israel on *Multiscale Imaging of the Angiogenic Network.*
She investigates regulatory mechanisms of angiogenesis – blood vessel formation and growth.

**Juhani Knuuti** - Turku, Finland on *Imaging of Vulnerable Plaques from Mice to Man*
His main research field is noninvasive cardiovascular imaging especially using PET, SPECT, echocardiography, MRI and CT.

**Adrian D. Nunn** - Princeton, USA
His main interest is the development of standard of care clinical imaging agents for personalized medicine in particular the molecular imaging modalities of nuclear, ultrasound and optical imaging

**Ron M.A. Heeren** - Amsterdam, The Netherlands on *Image-n-omics: Innovation in Molecular Imaging with Mass Spectrometry*
His academic research interests are the fundamental studies of the energetics of macromolecular systems, conformational studies of non-covalently bound protein complexes, e-biobanking research and the development and validation of new mass spectrometry based molecular imaging techniques for the life sciences.

Michal Neeman and Juhani Knuuti are ESMI Council members.

[www.wmicmeeting.org](http://www.wmicmeeting.org)
We are excited to emphasise the importance of the educational part by developing a new concept based on a 3-year-curriculum-format covering the main topics “Chemistry of contrast media”, “Hardware”, “Postprocessing and Cross Validation”, and “Biology”. We succeeded in attracting high-level experts who are sharing our ambition and developed excellent educational 3-year-concepts. In 2012 the Educational Sessions are mainly organised by the ESMI. Fabian Kiessling from Aachen, Germany together with Robert Gillies from Tampa, US are serving as Chairpersons for the Educational Sessions.

Read more about the educational programme and speakers at www.emim.eu

THANKS for developing great 3-year-educational concepts

Chemistry of contrast media
Basics - probes and suitable imaging modalities
Fabian Kiessling & Twan Lammers - Aachen, Germany

Biologicals
Tony Lahouette - Brussels, Belgium

Small molecules
Dean Sherry, Dallas, US

Particles and polymers
Klaas Nicolay, Eindhoven, Netherlands

Hardware
Optical, Ultrasound, Photoacoustics
Jorge Ripoll - Heraklion, Greece & Georg Schmitz - Bochum, Germany

MR Fundamentals for Life Scientists
Michal Neeman - Rehovot, Israel & Joseph Ackerman - Bethesda, US

Nuclear Imaging
Steve Meikle - Sydney, Australia

Postprocessing and Cross Validation
Modelling and quantification
Adriaan Lammertsma - Amsterdam, Netherlands

Basics of image processing
Wiro Niessen - Rotterdam, The Netherlands

Biology
Cardiovascular
René Botnar - London, UK

Cancer
Markus Rudin - Zuerich, Switzerland & Robert Gillies - Tampa, US

Central Nervous System
Vesna Sossi - Vancouver, Canada

With deadline 17 April 2012 we received 1128 abstracts:

- Precilical in vivo 545
- Preclinical – Tissue and Cellular Based 99
- Translational & Clinical 122
- Technology & Software 136
- Chemistry & Probes 226

Become an ESMI member and benefit from the reduced fee - end of early registration 30 June 2012
The 5-day Workshop...
September 10-14, 2012 Trinity Biomedical Science Institute in Dublin – right after the WMIC/EMIM

... will cover the basic and advanced theoretical background of imaging modalities and contrast agents, quantitative image analysis and kinetic modelling, radiochemistry, and disease specific imaging with a strong focus on teaching. Beside the theory group work and teaching sessions will give you the opportunity to go into the depths of imaging analysis - guided by high-level experts and excellent teachers. Take part in the journal club - analyse, discuss papers, and put your considerations up for discussion.

This workshop is part IV of the Curriculum on “Preclinical Imaging in Small Laboratory Animals – PRIMA”

TOPICs
- Imaging modalities and contrast agents
- Quantitative image analysis and kinetic modelling
- Radiochemistry
- Disease specific imaging – Oncology, Neurology, Cardiology, Immunology, and Infectious Diseases

www.prima-curriculum.eu

TOPIM 2013 – 7th ESMI Winter Conference
January 20-25, 2013 at the Ecole de Physique in Les Houches, France

Imaging Hallmarks of Cancer

“Neither the sun nor death can be looked at with a steady eye” wrote Francois de La Rochefoucauld.

Today’s in vivo images of cancer demonstrate that cancer is no longer synonym of death but still linger somewhere in between blindness and clarity. The next stage in cancer imaging will be to produce and interpret in vivo images of cancer according to the biological hallmarks of cancer defined by Hanahan and Weinberg: sustained proliferative signaling, evasion from growth suppressors and immune destruction, enabling of replicative immortality, tumor-promoting inflammation, activation of invasion and metastasis, induction of angiogenesis, genomic instability and mutation, resistance to cell death and deregulation of cellular energetics.

The 7th edition of TOPIM will discuss the state-of-the-art in imaging the hallmarks of cancer.

www.topim.eu
TOPIM 2012 – the 6th ESMI Winter Conference took place from April 20-25 in the Ecole de Physique in Les Houches, France

The programme started on Monday April 16, 2012 with a three-hour Educational Keynote Lecture given by Adriaan Lammertsma from Amsterdam followed by an introductory talk on “Optical Imaging” by Jorge Ripoll, Heraklion. These Educational Lectures provided an overview of the entire theme and enabled all attendees to comprehend the lectures. Terry Jones delivered a Key Note Lecture on “The Past Achievements of Brain PET and the Role of Quantification” and an evening discussion on “The Future of PET”

“I hope this will be stimulating for the attendees especially when itemizing the quantitative procedures that accompanied the recording of these achievements. Also, where I can, I will define the experimental paradigms that were used in the studies which should also be of interest.” Terry Jones

A very special event was the Champagne reception by BiospaceLab on Monday evening. It was the perfect start into an exciting, interactive, and intensive week in the French Alps!

Images speak for themselves, but exactly what language are they speaking?

The TOPIM 2012 Committee

Bertrand Tavitian - Orsay
Marion de Jong - Rotterdam
Adriaan Lammertsma - Amsterdam
Boudewijn Lelieveldt - Leiden
Michal Neeman - Rehovot
Vasilis Ntziachristos - Munich
Bernd Pichler - Tübingen
Two guided poster sessions chaired by Michal Neeman & Adriaan Lammertsma and by Marion De Jong & Jorge Ripoll were held this year in Les Houches. The best poster presenters had the opportunity to give a talk the following day.

The poster award winners: Pei Dong from Grenoble on “Quantification of Bone Cell Connections from 3D Nano-CT Images” and Ralf Engbers from Muenster on “Sparse Recovery in Myocardial Blood Flow Quantification via PET.”

We are happy and pleased that all these high-level experts brought in their expertise and are convinced that interdisciplinary knowledge exchange is a perfect basis for innovation. Great to have you “on board” and are hoping that you stay attached to the ESMI!

Modelling and Quantification
Heiko Backes Cologne Quantification of cerebral glucose consumption in pathological tissue
Ronald Boellaard Amsterdam Parametric analysis of dynamic PET studies
Vincent Cunningham Aberdeen The General PET Compartment Model
Klaus Schäfers Münster High-resolution small animal PET imaging
Claus Svarer Copenhagen Automatic region of interest delineation and Partial volume correction
Paul Tofts Brighton, Sussex Modelling in DCE-MRI

Image Processing and Analysis
Daniel Bulte Oxford Calibrated BOLD FMRI and Measuring Oxygen Metabolism
Michal Irani Weizman Institute Seeing the invisible; Predicting the unexpected
Boudewijn Lelieveldt Leiden Image analysis challenges in multi-modal pre-clinical imaging studies
Renaud Maroy Orsay Fast, Robust and Accurate extraction of time activity curves in rodent PET whole-body images
Erik Meijering Rotterdam Bioimage Analysis of Cellular and Molecular Dynamics
Sebastian Ourselin UCL Development of imaging biomarkers for neurodegenerative diseases
Hans Wehrl Tübingen Chances and Challenges of PET/MR imaging
Jérémie Mattout Lyon When Electrophysiology meets Neuroimaging: Magnetoencephalography

Image Management and Visualisation
Wiro Niessen Rotterdam Data storage & analysis: “Opportunities and challenges in biomedical imaging research”
Jean-Marie Burel Dundee The Open Microscopy Environment: Open Image Informatics for the Biological Sciences

Image Reconstruction
Tobias Block New York Iterative Reconstruction Techniques for Faster Scan Speed in Magnetic Resonance Imaging
Johan Nuyts Leuven Image reconstruction from projections in SPECT, PET and TOF-PET
Jorge Ripoll Heraklion Image Reconstruction: What makes optical imaging an ill-posed problem?

TOPIM 2012 was co-funded by the FP7 projects INMiND – Imaging of Neuroinflammation in Neurodegenerative Diseases and ENCITE – the European Network for Cell Imaging and Tracking Expertise. We also gratefully acknowledge the support of Caliper, BiospaceLab, Roche, Servier, and carestream!

View all abstracts, the entire programme and more at www.topim.eu
INMiND – a new European project

INMiND - Imaging of Neuroinflammation in Neurodegenerative Diseases

The goal of INMiND – coordinated by Andreas Jacobs from Münster - is to identify novel biological targets of neuroinflammation for both diagnostic and therapeutic purposes and to translate this knowledge into clinical application and patient benefit. This aim will be achieved through carrying out collaborative research on molecular mechanisms that link neuroinflammation with neurodegeneration.

The general objectives of INMiND:

- to identify novel mechanisms of regulation and function of microglia under various conditions (inflammatory stimuli; neurodegenerative and -regenerative model systems);
- to identify and implement new targets for activated microglia, which may serve for diagnostic (imaging) and therapeutic purposes;
- to design new molecular probes (tracers) for these novel targets and to implement and validate them in vivo in innovative model systems and in patients;
- to image and quantify modulated microglia activity in patients with mild cognitive impairment undergoing immune therapy, and to relate the findings to clinical outcome.

“Within INMiND we bring together a group of excellent basic scientists and clinicians with a proven background in efficiently accomplishing common scientific goals, who belong to highly complementary fields of research (from genome-oriented to imaging scientists and clinicians), and who are dedicated to formulate novel image-guided therapeutic strategies for neuroinflammation-related neurodegenerative diseases.” Andreas Jacobs

New online journal

Submit a research article for free – ESMI members only!

The altered metabolism of tumour cells is a rapidly growing area of research and it is also clear that metabolic diseases, such as obesity and diabetes, have links to cancer in ways that are not yet understood. We wanted you to be one of the first to know about our new journal, “Cancer&Metabolism” that will be launched to uniquely fulfil the needs of this burgeoning field. To distinguish the journal from others, “Cancer & Metabolism” will prioritize rapid publication of significant research and encourage short reports.

The journal welcomes studies on all aspects of the relationship between cancer and metabolism, including imaging of metabolism. Crucially, we will limit reviewer-requested experiments to those essential for the scientific integrity of the study. This novel approach will facilitate fast review times and has so far been well received by the cancer metabolism community. Once Cancer & Metabolism has launched, all articles will be published online and open access within three weeks of acceptance.

As a member of the ESMI and on behalf of the Editors-in-Chief it is with pleasure that I invite you to submit a research article for free to “Cancer & Metabolism” – just become an ESMI member!

Editors-in-Chief

- Chi Van Dang – Pennsylvania, US
- Michael Pollak – Montreal, Canada

Senior Editors

- Kevin Brindle – Cambridge, UK
- Eyal Gottlieb – Glasgow, UK

www.cancerandmetabolism.com
NEWSLETTER

EVENTS
congresses, workshops, schools

May 21-23, 2012
WORKSHOP - New tools and applications in optical imaging and its transition into the clinic - Leiden, The Netherlands

Jun. 11-15, 2012
WORKSHOP - Summer School on MRI, RAMAN and Food technology in Alghero, Sardinia, Italy

Jun. 18-22, 2012
WORKSHOP - Summer School at the School for cardiovascular diseases in Maastricht, The Netherlands

July 9-13, 2012
SNM 2012: Annual Meeting in Miami, US

July 14-18, 2012
8th FENS Forum of European Neuroscience in Barcelona, Spain

Sep. 5-8, 2012
World Molecular Imaging Congress - WMIC 2012 and European Molecular Imaging Meeting - EMIM 2012 in Dublin, Ireland

Sep. 8-11, 2012
16th EFENS in Stockholm, Sweden

Sep. 17-19, 2012
Meeting of the “Interdisciplinary German Network Molecular Imaging” in Erlangen, Germany

Oct. 1-5, 2012
MICCAI 2012 in Nice, France

Oct. 4-6, 2012
ESMRMB - 29th Annual Scientific Meeting in Lisbon, Portugal

Oct. 27-31, 2012
EANM’12 - 25th Annual Congress in Milan, Italy

Nov. 5-9, 2012
WORKSHOP - 3rd Mouse Imaging Academy in Muenster, Germany

Jan. 20-25, 2013
7th ESMI Winter Conference “TOPIM 2013” on IMAGING HALLMARKS of CANCER

Jan. 28 - Feb. 1, 2013
WORKSHOP - 8th Small Animal Imaging Workshop 2012 in Tuebingen, Germany

for details please visit the “congress/workshop calendar”

EU NEWS
new documents

May 14, 2012 FP7
People 2013 orientation paper

Apr. 19, 2012 FP7
Health 2013 orientation paper

Mar. 29, 2012 FP7
How to avoid common errors identified in cost claims

Feb. 7, 2012 HORIZON 2020
Innovation Union Scoreboard 2011

for further information, deadlines, and continuative links please visit the “EU news” section
Mar. 13, 2012 FP7
Mar. 13, 2012 FP7
Mar. 13, 2012 FP7
Mar. 6, 2012
Innovative Medicines Initiative – IMI
Feb. 2, 2012 – ERC
Oct. 20, 2011 FP7

Marie Curie International Outgoing Fellowships for Career Development (IOF)
Marie Curie International Incoming Fellowships (IIF)
Marie Curie Intra-European Fellowships for Career Development (IEF)
5th call 2012 stage 1
Proof of Concept
Marie Curie Career Integration Grants (CIG)

for further information, deadlines, and continuative links please visit the “EU news” section
Please always validate the given information through the official websites of the European Commission

We aim to provide you with interesting and up-to-date information about the MI activities in Europe and beyond to further encourage the interdisciplinary cross-communication.

subscribe/unsubscribe

European Society for Molecular Imaging
Eupener Str. 57-59
50933 Cologne
+49 221 28206832
www.e-smi.eu

For any enquiries do not hesitate to contact the ESMI office Doris Kracht via office@e-smi.eu