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NEW IMSIS WEBSITE

Visit our new IMSIS website for further news and updates
www.msimaging.science

NEW LINKEDIN PAGE

Join now our new IMSIS Conference LinkedIn page to follow the society's activities and updates
www.linkedin.com/IMSIS

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ANNOUNCEMENTS

The International Mass Spectrometry Imaging Society IMSIS

The unified International Mass Spectrometry Imaging Society (IMSIS) (merging together the Mass Spectrometry Imaging Society and the Imaging Mass Spectrometry Society) was formed as a legal entity in November 2023 as a UK-based Charity. It is temporarily under the administration of a Board of Trustees. The six trustees, three appointed by MSIS board (Europe) (Malcolm Clench, Peter Marshall, Martina Marchetti-Deschmann) and three by IMSS board (Americas) (Peggi Angel, Richard R. Drake and Julia Laskin)

Under UK Charity law, trustees are accountable to the UK Charity Commission and have a duty to ensure that the Charity operates within the law and its accepted constitution and charitable purposes.

The Trustees are not the governing body of the Charity and will hand over these functions to an Executive Board to be elected at the 1st IMSIS Annual General Meeting, which will take place at the 2nd IMSIS Conference held in Münster in September 2024. When the Executive Board is elected, the Trustees do, however, retain an oversight role as described above.



Join the IMSIS Board and Shape the Future of Mass Spectrometry Imaging!

Help guide IMSIS's strategic initiatives and drive positive change within the society and the MSI community!

If you are interested in becoming involved in the new unified society, please contact the IMSIS Europe president, [Martina Marchetti-Deschmann](mailto:martina@msimaging.org)





Don't Miss The 2nd IMSIS Conference Annual Conference on Mass Spectrometry Imaging and Integrated Topics

The 2nd Annual
International Mass
Spectrometry Imaging
Conference will be
held in Münster,
Germany, September
9-12, 2024.

It's not too late to
register! Visit the
conference website
for more information:
imsis2024.dgms.eu/

Structure of IMSIS as UK-based Charity

IMSIS is structured as a Charitable Incorporated Organisation (CIO), whose 'members' are its constituent organizations. Hence, upon formation, IMSIS initially has only two members: MSIS and IMSS, who have voted to rename themselves IMSIS Europe and IMSIS Americas respectively. This structure was considered highly advantageous due to the ability it provides for other imaging societies that may form around the world in the future to join.

Since organizations are the members of IMSIS, the status of individuals is members of the constituent organizations (IMSIS Americas and IMSIS Europe) and Associate Members of IMSIS.

IMSIS Americas and IMSIS Europe, along with any future member organizations, retain autonomy to operate in their respective regions and will propose members of the IMSIS Executive Board. The role of the IMSIS Executive Board will be to organize the Annual Meeting, coordinate global events to avoid scheduling conflicts, and fund and organize educational activities.

The constitution of IMSIS, which was drawn up with detailed legal advice, gives the Executive Board a great deal of freedom in how it operates. It is not an easy read but well worth scanning if you have about 15 minutes to spare. The current boards of IMSIS Americas and IMSIS Europe would now very much like input from the imaging community on how you would like to take advantage of the opportunities this offers.

Join the community: <https://www.msimaging.science/>

IMSIS Logo Competition

End of 2023, we ran a competition to allow the community to design and elect a logo for the new unified society. 16 logo concepts were submitted from all over the world, and 500 votes were registered! The logo was revealed during the 1st IMSIS Conference in Montreal.

The globe represents the international aspect of IMSIS with four different views to allow for focusing on one or all areas. The signals represent the data being collected by researchers across the world. The green and blue colors represent the environment in which we all live.



A big thanks to Nathan Johnson (left) and Chris Anderton (right) (PNNL), the authors of the IMSIS logo and its variations, for their creativity in designing a logo that represents the values of our international community!



Join the community and shape the future of MSI...

Agenda includes

**10 Topics discussed over
13 sessions
6 Plenary Talks
14 Keynote Lectures
63 Oral Presentations
2 Poster Sessions
6 Vendor Talks
And lots of Social
Activities!**

Invited Speakers include

Peggi Angel
Pierre Chaurand
Helen Cooper
Philip Doble
Shane R. Ellis
Isabelle Fournier
Kristine Glunde
Angus Grey
Amanda B. Hummon
Søren Husted
Martina Marchetti-
Deschmann
Kristina Schwamborn
Shuichi Shimma
Bernhard Spengler
Jeffrey M. Spraggins
Nicole Strittmatter
Frank Vanhaecke

INTERVIEW:

Meet distinguished members of the MSI community:

Dr Peter Marshall

Former Principal Research Scientist, GlaxoSmithKline, London, UK, now Consultant, Mass Spectrometry Imaging Solutions.



After graduating from the University of Hull in 1984 Peter did a PhD at the University of Reading in collaboration with ICI Plant Protection Division (now Syngenta) at Jealott's Hill, Berkshire. He joined Glaxo (now GlaxoSmithKline) in February 1988 as a Natural Product Extraction Chemist before moving into the mass spectrometry group in 1993. His many roles included the development of methodologies for analysing compounds from single resin beads as part

of the combinatorial chemistry era. This work also included the use of Inductively Coupled Plasma mass spectrometry (ICP-MS) which led us into MALDI MS imaging about 20 years ago.

Peter pioneered the introduction of MALDI MS Imaging into GSK and was an active member of the recent European Union Cooperation in Science and Technology (COST) Action for MALDI MS Imaging representing the UK. In this capacity, Peter was instrumental in organising and co-running several workshops for the advancement of techniques for On-Tissue Digestion prior to MALDI Imaging analysis.

Peter was part of the original Team that helped co-found the Mass Spectrometry Imaging Society (MSIS) and is currently serving as the Industrial Link on the board of the MSIS.

Peter's use of MALDI MS Imaging has recently morphed into Ultra High Throughput Screening by MALDI and through a collaboration between GSK, Bruker and Analytik Jena/Cybio has led to the development of a fully Automated system that has the potential to spot and analyse a full diversity 2 million compound assay in ~8 days.

How you came to be involved in MSI?

I first got involved in MSI over 20 years ago after the demise of the combinatorial chemistry revolution within GSK. We had been using ICP-MS to analyse materials derived from single, solid-phase beads and were now in need of new applications. We began to profile metal ion content (in particular bromine) in biological samples such as human plasma. The early work focused on the analysis of bromine-labelled peptide metabolism using LC coupled-ICP-MS for which we helped pioneer. The natural progression from this was to use Laser Ablation ICP-MS for the analysis of metal-labelled antibodies. We demonstrated the distribution of β -amyloid deposits in transgenic mouse brain tissue through the



Join the community and shape the future of MSI...

Review of the 1st IMISIS Conference Annual Conference on Mass Spectrometry Imaging and Integrated Topics

The first meeting of the of the newly formed International Mass Spectrometry Imaging Society comprising the former Mass Spectrometry Imaging Society (MSIS) (Europe) and Imaging Mass Spectrometry Society (IMSS) (US) was met with great success last October in Montreal, Canada. As with the past OurCon conferences that were organized jointly between IMSS and MSIS, this conference is a global forum on mass spectrometry imaging (MSI) research.

The Conference was well attended, (235 participants +14 Sponsors) and a great success.



measurement of Eu- and Ni-coupled antibodies. Whilst we had many successes, we were plagued with the age-old story of either the label being displaced or the properties of the labelled molecule not matching that of the unlabelled version. A label-free imaging approach was ideally what we wanted. In parallel, we had reached out to and began collaborating with Prof. Malcolm Clench's group The rest they say, is history!

What do you think MSIS brings to the MSI field? What else would you like to see from the society?

A Wonderful Community! I was fortunate to be part of the EU COST Action consortium in the early days and am proud to have been involved in helping to build this extraordinary and amazing community. One of the main aims of the COST Action was to build a MSI community, share ideas and develop best practises; with money available to do it. This was done through workshops, Training sessions, Conferences and the Short-Term Scientific Missions (STSM) where it was possible to send early-stage researchers to each other's labs to learn how best to do things. There were loads of interactions, scientific discussions etc and all done in a lovely convivial environment.

Obviously, during the Covid Pandemic it was not possible to hold any face-to-face interactions, but now I sincerely hope that we can reinvigorate the community. In particular, I would like to see the return of the mini workshops where interested parties discussed specific topics, Training sessions and of course the STSMs.

Have you participated in OurCon and if yes what are your best memories?

YES! I'm very proud and privileged to have attended every OurCon meeting and also have the "claim to fame" that I have presented at every European meeting. (OurConVI was invitation only). In addition to discussing all the latest findings and sharing exciting developments (too numerous to mention), it is also the social interactions that made OurCon so truly remarkable. I have fond memories from all of them, but I guess it's always your first experience that sticks in your mind. The 1st OurCon in Ourense was in a lovely Spa hotel miles from everywhere and I think we had taken over the whole hotel, effectively we were a "captive audience".

You would go down to breakfast and meet MALDI Imagers from all over the World, the same again at the Coffee breaks, the Lunchtimes, evening meals and of course the bar in the evening. I don't think I had ever been to a Conference before where I spoke with every single delegate (and on at least one occasion!). Together with the offer of 5 STSMs up for grabs to anyone who could set up a suitable Project during the week thrown in, the discussions, networking and interactions between everyone in the Community was just phenomenal! This is why we have tried to maintain this format ever since.



Join the community and shape the future of MSI...

New IMSiS Website Launched

And Great News! The logo has been integrated to the new website of IMSiS which is now live!

www.msimaging.science/

With enormous thanks to Tiffany Siegel and Madeline Colley for their amazing work and exceptional dedication and expertise in creating and bringing the new IMSiS website msimaging.science to life.



What's next? We are working very hard to allow membership registration and we will let you know as soon as possible when this is possible! All information on the website and on our new LinkedIn Page!

IMSiS home of MSI | IMS



What drives your enthusiasm for the field of MS imaging?

The Three Pillars that are the driving forces behind drug discovery are: 1) Where does the drug go? 2) Does the drug reach the desired target? 3) Does reaching the site of action result in a pharmacological response (and produce any clinically relevant biomarker(s) for this response)?

MSI is a very powerful tool contributing extremely valuable information/answers to these critical questions and working in the knowledge that we are contributing towards the development of new drugs/treatments and enabling us to get ahead of disease is very inspiring.

How do you think the field will be in 5-10 years from now?

A major unmet need within the Pharma Industry are label-free analytical techniques for determining drug distribution and/or characterizing the molecular composition of tissues and cells on a (sub)cellular level, i.e., at a pixel size of 1 μ m or smaller.

The motivation for solutions to these challenges has always been there and great strides have been made to-date; I believe that this will be realised with commercially available instruments within 5-10 years. Additionally, there will be much more complementarity with other modalities, e.g., Optical Microscopy techniques e.g., confocal microscopy /fluorescence imaging, RAMAN/CARS etc., both from an image co-localisation and a data analytics point of view.

What are the main challenges and the biggest success you have encountered in your career and what do you think can be improved in the field of MSI?



Join the community and shape the future of MSI...

MSI vacancies

Research Specialist

Johns Hopkins University
Mass spectrometry imaging applications and data analysis in the Applied Imaging Mass Spectrometry (AIMS) Core at The Johns Hopkins Medical Institutions.

jobs.jhu.edu/job/Baltimore-Research-Specialist

PhD Studentship

University of Reading
Advancing Liquid Atmospheric Pressure (LAP) MALDI Mass Spectrometry

www.phds/project/advancing-liquid-atmospheric-pressure-lap-maldi-mass-spectrometry/

The biggest challenges I have faced over the years are the doubters, "I didn't think it could be done", "what's the value in spatial distribution? Homogenising the tissue and analysing by LC-MS is just as informative".

My biggest success was the introduction of MALDI MS Imaging into GSK and creating the first MALDI Imaging Lab. Additionally, I am super proud to have been the Project Leader responsible for the development and successful implementation of the Automated (Ultra-) High Throughput MALDI Screening Platform capability within GSK, working with some great people to "make it happen".

What advice would you give to a student entering an MSc/PhD project?

Reach out! Don't be afraid to ASK! There are no silly questions. If you do not know the answer, it is not a silly question.

Take as many opportunities presented to you as you can, be sure to have several mentors to help you through the journey.

Make sure you really are interested in the project you are doing; you are far more likely to want to stay up late working on something you enjoy (although I'm not advocating working late in the lab, unattended!!, more thinking about the writing up!). Enjoy!

IMSIS Europe Executive Committee



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Martina Marchetti-Deschmann



Vice president:
Malcolm Clench



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Website:
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Secretary:
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International liaison:
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Communication:
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Outreach:
Gregory Hamm



Initiatives:
Ann-Christin Niehoff



Industry rep:
Peter Marshall



Academia rep:
Jens Soltwisch



Past president:
Liam McDonnell



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