

Minutes of the 2020 AGM of the AFM & Scanning Probe Microscopies Section of the Royal Microscopical Society which took place on Monday 16 November 2020 during the Virtual Microscopy: Advances, Innovation, Impact 2020 Meeting

Members Present: Professor Sonia Contera (AFM & SPM Chair), Professor Oleg Kolosov (AFM & SPM Deputy Chair), Professor Grace Burke FRMS (RMS President), Dr Peter O'Toole FRMS (RMS Vice President), Professor Michelle Peckham FRMS (RMS Honorary Secretary), Mr Rod Shipley (RMS Honorary Treasurer), Professor Rik Brydson FRMS (Honorary Secretary for Education (Physical Sciences)), Professor Maddy Parsons FRMS (Honorary Secretary for Education (Life Sciences)), Dr Brad Amos Hon FRMS, Dr Kurt Anderson FRMS, Dr Paul Appleton FRMS, Dr Miryam Arredondo FRMS, Mr Mike Ashton FRMS, Mr Steve Bagley FRMS, Dr Saskia Bakker FRMS, Mr Paul Balas, Dr Alex Ball FRMS, Ms Eliana Battistella, Mr Ian Belding, Dr Jacquelyn Bond FRMS, Professor Stanley Botchway, Ms Beatrice Bottura, Dr Nicola Cayzer, Miss Jessica Chandler, Dr David Chatelet, Mr Jay Christopher, Dr Paola Ciselli FRMS, Dr Laura Clark, Dr Charles Clifford FRMS, Dr Joel Cohen, Dr Sean Collins, Dr Lucy Collinson FRMS, Ms Maria Conejero, Dr Susan Cox FRMS, Mrs Tracey Davey, Mr Derek Davies FRMS, Dr Giovambattista Depietra FRMS, Dr Emmanuel Derivery, Dr Michael Dixon, Dr Peter Djali FRMS, Professor Vinayak Dravid FRMS, Dr Elizabeth Duke, Professor Rafal Dunin-Borkowski FRMS, Dr Chris Dyer, Dr Anna Lena Eberle, Professor Francis Adelade GO Fakoya, Mrs Kim Findlay FRMS, Professor Roland Fleck FRMS, Dr Leslie Franchi FRMS, Mr Matthew Francis, Mr Adrian Garcia Burgos, Dr Iria Gonzalez-Dopeso Reyes, Dr James Gott, Dr Joelle Goulding, Dr Nicola Green FRMS, Mr Owen Green FRMS, Mr Paul Gunning FRMS, Miss Pamela S Hamer FRMS, Dr Sarah Harper, Dr Daniel Haspel, Professor Pippa Hawes FRMS, Mr Qamar Hayat, Dr Brian Hayes FRMS, Mr Daniel Hewes, Professor Jamie Hobbs, Dr Karen Hogg FRMS, Dr Andrea Holme, Miss Carmel Howe FRMS, Dr Gareth Howell, Dr Ashley Howkins, Dr Chen Huang, Professor Sir Colin Humphreys Hon FRMS, Dr Grenham Ireland FRMS, Mr Gareth Jackson, Dr Izzy Jayasinghe, Dr Mark Jepson FRMS, Mr Peter Johnson, Dr Errin Johnson FRMS, Dr Martin Jones, Dr Lynne Joyce FRMS, Dr Sohini Kar-Narayan, Dr Georgeanna Kawaley, Dr Daniel Kelly FRMS, Dr Demie Kepaptsoglou, Professor Rob Kesseler FRMS, Mr Sarfraz Khan, Dr Werner Knebel, Dr Marie Kokolski FRMS, Professor Roland Kröger FRMS, Dr Alex Laude FRMS, Dr Nicola Lawrence FRMS, Dr Leandro Lemgruber, Dr Imre Lengyel, Professor Stefan Linder, Mr Yunxing Ma, Mr Pedro Machado, Mr Kevin Mackenzie FRMS, Dr Kirsty MacLellan-Gibson FRMS, Dr Alessandro Di Maio FRMS, Mr Ofentse Makgae, Dr John Mansfield, Ms Joanne Marrison FRMS, Mr Patrick McBean, Professor Gail McConnell FRMS, Dr Emma McDermott, Mr Eddie McGuigan, Dr Greg McMahon FRMS, Mr Steve Metcalfe FRMS, Dr Katy Moffat, Mr Barry Moran, Dr Flavia Moreira-Leite, Mr David Morgan, Mr Ricardo Morilla FRMS, Dr Caroline Muellenbroich FRMS, Ms Marlies Muernseer, Dr Duncan Muir, Mr Tiarnan Mullarkey, Professor Sebastian Munck, Dr Mogana Das Murtey, Mrs Niga Nawroly, Dr Chas Nelson, Dr Glyn Nelson FRMS, Dr Ulla Neumann FRMS, Dr Shirley Northover FRMS, Dr Fabio Nudelman, Dr Tom O'Hanlon, Mr Richard Osgood, Dr Dogan Ozkaya FRMS, Dr Graeme Park FRMS, Dr Julia Parker, Dr Christopher Parmenter FRMS, Mr Seymour Perlowitz FRMS, Dr Lucia Pinon-Giraldez, Dr Aleks Ponjavic, Dr Eric Prestat FRMS, Ms Frances Quigley, Professor Klaus Qvortrup FRMS, Dr Stefanie Reichelt, Dr Roland Remenyi FRMS, Ms Lorelei Robertson, Professor Brian Rodriguez, Dr Liam Rooney FRMS, Dr Eduardo Rosa-Molinar, Dr Mara-Camelia Rusu, Dr Rebecca Saleeb, Ms Nicole Salgado Cortes, Dr Hilary Sandig, Dr Andrew J Scott FRMS, Ms Jennifer Simpson FRMS, Mr Kevin Smith FRMS, Mr Alexander J Sossick FRMS, Mrs Harriet Spatharakis, Dr Natasha Stephen FRMS, Dr Jane Stinchcombe, Dr Debbie Stokes FRMS, Dr Kornelis Straatman FRMS, Mr Leslie Stump FRMS, Dr Cassandra Terry, Mr Michel Theron FRMS, Dr Steven Thomas FRMS, Mr Ashutosh Tiwari, Ms Dhani Tracey-White, Miss Beatriz Vale, Professor Ventsislav Valev, Professor Paul Verkade FRMS, Ms Suzy Vitale, Dr Kislon Voitchovsky FRMS, Ms Margaret I Walby FRMS, Dr Thomas Walther FRMS, Dr Theresa H Ward FRMS, Dr Ecaterina Ware, Dr Claire Wells FRMS, Miss Lucinda Wight FRMS, Dr Neil Wilson FRMS, Professor Tony Wilson Hon FRMS, Dr Christopher Wood, Mr Heath Young and Ms Xiangli Zhong FRMS.*

I. Preliminary Courtesies and Apologies for Absence

Apologies for absence had been received from Dr Adrian Burden FRMS, Mr Mark Cheetham, Mr Maurice Dunman FRMS, Dr Nadia Halidi, Mrs Gillian Hibbs, Dr John Hutchison Hon FRMS, Professor Beverley Inkson FRMS, Dr Alexander Lichius FRMS, Dr James Perkins, Professor Anthony W Robards OBE FRMS and Professor David B. Williams Hon FRMS.

2. Minutes of the 2019 Annual General Meeting

The Minutes were and approved as a true and accurate record of the meeting.

3. Matters Arising

There were no matters arising.

4. Report from Section Chair

Professor Sonia Contera:

"The last Section AGM Section took place during the AFM and SPM Meeting in Manchester, July 2019 as part of the Microscience Microscopy Congress (mmc2019). The meeting included the following sessions:

- Advancing Materials Science via Scanning Probes. Session Chair: Oleg Kolosov (Lancaster University, UK).
 Invited: Cyrus F. Hirjibehedin (SPM Medal), Franco Dinelli, Olga Kazacova
- SPM of Soft and Biological Matter. Session Chair: Jamie Hobbs (University of Sheffield, UK) Invited Alice Pyne and Felix Rico.
- SPM A tool for Pharmaceutical and Applied Biological/Biomedical Research. Session Chair: Stephanie Allen (University of Nottingham, UK). Invited Dimitros Lamprou, Polina Prokopovich
- SPM: Nanomechanics for Biology and Biomedicine. Session Chair: Nuria Gavara (Queen Mary University of London, UK). Invited Sergi Garcia-Manyes, Jamie Hobbs

The sessions were excellent, and well attended and the organising committee ensured a good gender balance was achieved for the meeting.

We celebrated being a part of the SPM community with a great mmc2019 plenary speaker, Sergei Kalinin with a talk on 'assembling matter atom by atom: applications of machine learning to scanning transmission electron microscopy'. The Medal for Scanning Probe Microscopy was awarded to Cyrus F. Hirjibehedin during the meeting.

A pre-congress AFM workshop prior to the mmc2019 conference was held. The organisers were Sonia Contera, Oleg Kolosov, and Charles Clifford, with Nuria Gavara and James Vicary as invited speakers, and Hitachi, Oxford Instruments and Nano-surf led the hands-on workshops.

It was a privilege to present Professor Mervyn Miles with an Honorary Fellowship. Professor Miles was due to receive his certificate during the 2020 AFM and SPM Meeting in Sheffield, but due to the COVID-19 pandemic this meeting has been postponed. We are hoping that the presentation of the Award at an in-person meeting will happen soon.

The AFM and SPM Meeting was held virtually on 3-4 November 2020, and organised by Professor Jamie Hobbs and Dr Alice Pyne. The meeting was extremely well attended, and was an excellent example of a successful virtual meeting. The invited speakers were:

- Dr Simon Connell, University of Leeds Quantifying Dynamics in High-Speed AFM
- Dr Steven Schofield, University College London Quantum States of Atomic Point Defects Semiconductors
- Dr Kristina Rusimova, University of Bath Mapping the Surface Dynamics of Hot Electrons with STM Molecular Manipulation
- Dr Nina Balke, Oak Ridge National Laboratory Electromechanical Phenomena in Piezoelectric Materials Probed by AFM the Challenge of Quantification

I would like to thank the AFM companies who continue to support the activities of the Committee by sponsoring/exhibiting at our meetings. This is very much appreciated.

The future plans of the Committee include holding the 2021 AFM and SPM meeting during mmc2021 in Manchester. The meeting will include the following sessions:

- Quantitative SPM for Biology, Biomedicine, and Bioinspired Technologies Session Chair Brian Rodriguez
- Functional scanning probe microscopy for advanced material science Session Chair Olga Kazakova
- SPM Techniques on Energy Materials and Processes Session Chair Ulrich Stimming
- New Frontiers in Quantum Matter Visualization Séamus Davis

The Committee are assisting with a virtual Data Analysis in Atomic Force Coffee morning, which is due to take place on 10 December. The organisers are Dr Alice Pyne, Dr Ioanna Mela, Dr Laia Pasquina Lemonch, Professor Jamie Hobbs and I, and there are already 80 delegates.

I'd like to thank the members of the Committee standing down, Dr Stephanie Allen, Dr Boume Boudjelida, and Dr Chris Mulcahy. We are pleased to confirm that Dr Mulcahy, in his capacity as Vice-Chair of the RMS Corporate Advisory Board, will continue to be invited to attend meetings.

I would like to welcome our new members to the Committee, Dr Sohini Kar-Narayan, Professor Brian Rodriguez, Dr Vladimir Korolkov and Dr Vishal Panchal.

This is my final AGM as Section Chair, but I will continue as Vice-Chair for a further year to support the Committee. I would like to wish every success to Oleg Kolosov who will be the Chair, and Jamie Hobbs who will be Deputy Chair of the Committee.

Finally, I would like to thank the RMS team for their fantastic support over the last 3 years, and their endless patience."

5. Election of Officers

There being no other nominations, the following Officers were duly elected:

Chair: Professor Oleg Kolosov, Lancaster University
Vice Chair: Professor Sonia Contera, University of Oxford
Deputy Chair: Professor Jamie Hobbs, University of Sheffield

6. Election of Ordinary Members (8)

There being no other nominations, the following Ordinary Members were duly elected:

Dr Charles Clifford, NPL

Dr Lorna Dougan, University of Leeds

Dr Laura Fumagalli, University of Manchester

Dr Sohini Kar-Narayan, University of Cambridge

Professor Brian Rodriguez, University College Dublin

Dr Steven Schofield, UCL

Dr James Vicary, Nunano

Dr Kislon Voitchovsky, University of Durham

In addition to the elected Committee Members, Mr David Morgan, Dr Vladimir Korolkov and Dr Vishal Panchal have been co-opted onto the Committee (up to 4 co-opted members). Dr Minkyung Kang has been co-opted as the Early Career Representative.

Dr Chris Mulcahy (Oxford Instruments and RMS CAB Chair) will be invited to attend meetings.

7. Any Other Business

There was no other business.

*Non-Members Present: Ms Stella Aslanoglou, Dr Maria Manuela Azevedo, Professor Daniel Bahena Uribe, Mr Ganesh Bangar, Ms Alison Beckett, Mr Paul Bennett-Hughes, Dr Olga Biskou, Dr Matthew Boebinger, Ms Katherine Brown, Dr Matthieu Bugnet, Miss Kate Burgoyne, Mr Benjamin Butler, Dr Anderson Caires, Dr Pasquale Cervero, Ms Raquel Checca, Dr Helena Coker, Dr Marie-Charlotte Domart, Ms Elizabeth Duffy, Mrs Linda Duncan, Mr Mohammed Fadhil, Dr Alessandro Felder, Dr Aruni Fonseka, Professor Jacky Goetz, Miss Abi Graham, Dr Wei Guan, Dr Fredrik Hage, Mr Glenn Harper, Dr Xavier Heiligenstein, Ms Annemarie Held, Ms Elizabeth Hillman, Mr Ian Holton, Dr Tzipi Hyams, Dr Jung Ho Hyun, Miss Lucy Isherwoood, Dr Deidre Kavanagh, Mr Christian Koch, Miss Eleni Konstantinopoulou, Dr Vineet Kumar, Dr Penny Lawton, Professor Alice Liang, Miss Shu En Lim, Mr Paco Lopez-Cuevas, Ms Ying Lui, Mr Omar Matar, Dr Maria J Mazon-Moya, Dr Elizabeth McCarthy, Dr Sudhajit Misra, Dr Aleksander Buseth Mosberg, Dr Ali Mostaed, Professor Serge Mostowy, Dr Dorothea Muecke-Herzberg, Dr Hoan Ngo, Dr Giuseppe Nicotra, Mr James Nunn, Miss Adaobi Ojiakor, Dr Anna Oliveras Martínez, Ms Elizaveta Olkhova, Dr Gizem Ozbaykal, Dr Hilda Amalia Pasolli, Mr Vinay Patel, Mr Peter Pilecki, Professor Quentin Ramasse, Mr Cam Robinson, Ms Marta Rudzite, Dr Matthew Russell, Mr Ebrima Saho, Dr Yannick Schwab, Mr Stan Schwartz, Mr Kieron Scully, Dr Violaine See, Mr Ankur Sharma, Mr Benjamin Shaw, Dr Alpesh Shukla, Dr Avinash Singh, Dr Maria Chiara Spadaro, Professor Toma Susi, Dr Raymond Unocic, Dr Chloe van Oostende-Triplet, Mr Daniel Waiger, Dr Shihao Wang, Ms Lauren Wilburn, Ms Steffi Woo, Dr Charles Wood, Dr Mingjian Wu and Mr Mingquan Xu.