



## **AFM & Scanning Probe Microscopies Section AGM Update 2020**

### **Professor Sonia Contera**

The last Section AGM Section took place during the AFM and SPM Meeting which took place as part of the Microscience Microscopy Congress (mmc2019) in Manchester in July 2019, and we ran 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 all excellent and well attended. We also celebrated being part of the SPM community with a great mmc2019 plenary speaker (Sergei Kalinin - Assembling matter atom by atom: applications of machine learning to scanning transmission electron microscopy).

We also awarded the Medal for Scanning Probe Microscopy to Cyrus F. Hirjibehedin. In the organisation committee and the speakers in the sessions we have achieved a good gender balance, we must regret the lack of E&D in our list of awardees.

We also ran a pre-congress AFM workshop before mmc2019 started (Organisers: Sonia Contera, Oleg Kolosov, and Charles Clifford, with Nuria Gavara and James Vicary as invited speakers; Hitachi, Oxford Instruments and Nano-surf led the hands-on workshops).

The committee put forward a proposal to the RMS Council for Honorary Fellowship for Professor Mervyn Miles, and we extend our congratulations to him. It was hoped that he would receive his certificate at the 2020 AFM and SPM Meeting in Sheffield, but because of COVID-19, this meeting was postponed until 3 – 4 November 2020, and it is hoped that Mervyn can be presented with his award in person soon.

As previously mentioned the AFM and SPM Meeting were 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. Our 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 also 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.

Our future plans include sessions for mmc2021 in Manchester, as part of the 2021 AFM and SPM Meeting:

- 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 also assisting with a virtual Data Analysis in Atomic Force Coffee morning which is due to take place on 10 December, and organised by Dr Alice Pyne, Dr Ioanna Mela, Dr Laia Pasquina Lemonch, Professor Jamie Hobbs and I, and registrations for this are already over 80.

I'd also to thank the departing members of the Committee: Dr Stephanie Allen and Dr Boume Boudjelida, as well as Dr Chris Mulcahy, although Chris, in his capacity as Vice-Chair of the RMS Corporate Advisory Board will continue to be invited to attend our meetings. I would also like to welcome our new members, Dr Sohini Kar-Narayan, Professor Brian Rodriguez, Dr Vladimir Korolkov and Dr Vishal Panchal. This is my final AGM as Section Chair, although I will continue as Vice-Chair for a further year. I'd like to wish every success to Oleg Kolosov who will be the next Chair, and Jamie Hobbs who will be the next Deputy Chair.

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