



EM Section AGM Update 2020

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It is a pleasure to write this report, as outgoing Chair of the RMS Electron Microscopy Section. Despite the great challenges of 2020, the RMS and the EM Section have remained active and have been able to support the microscopy community in various activities and initiatives.

Early in the year, the EM-UK meeting was successfully held in Plymouth before we had even heard of the term 'lockdown'. Soon though, in-person meetings had to be cancelled or postponed and the microscopy world went virtual. The RMS reacted quickly to support the community in switching to a virtual format, and the 'Virtual Electron Microscopy Facility Meeting' series was extremely popular and provided a forum for facility managers to discuss and design new ways of safe working in the COVID era. The 'Imaging SARS-COV-2 safely' webinar brought together expert pathologists, virologists and electron microscopists to share their experiences of safely handling and imaging containment level three pathogens and educated the community in interpretation of images of SARS-CoV-2 infected cells and tissues.

As well as virtual meetings, the section has made progress in evaluating the current provision of training in the UK, with additional training in single particle cryo EM being offered at Leeds University, and workshops planned for biological and materials sample preparation, which will resume once face-to-face training is viable. The section is also looking at ways to deliver online training in the meantime, in collaboration with the RMS Training FIG. Interdisciplinary discussions were also facilitated by a joint EM and EPS Section Meeting this year, which was particularly productive in identifying cross-disciplinary sessions for mmc2021, and I hope this can be repeated in the future.

It has been a bumper year for FIGs, and I am very excited to see the progress made by the Image Analysis FIG in growing and formalising their community, and in the various training initiatives they have set up and conducted virtually. It will be a great help to the electron microscopy community to have more experts in image analysis in research groups and facilities to help extract the most scientific knowledge out of our big image data. It is also very exciting that X-ray Microscopy experts, found within various sections (EM and EPS especially), are formalising their community and have come together in a new X-ray FIG chaired by Dr Liz Duke from Diamond.

It is my pleasure to confirm two awards coming from the EM Section this year. The 2020 Alan Agar Award was given to Dr Alexandra Pacureanu from ESRF for her work on imaging cells and tissues with synchrotron radiation as part of correlative workflows with electron microscopy, and one of the RMS Mid-Career Awards was given to Dr Yannick Schwab from EMBL Heidelberg for his work on 3D Correlative Light and Electron Microscopy.

Members of the EM Section have been active in various UK imaging initiatives, including BiolmagingUK, the UK volume EM infrastructure proposals, and with EMBL EBI looking at

metadata standards for bioimages being deposited into the EMPIAR and Biolmage Archive public archives. Outreach and Education in EM has also moved forward, with Dr Alex Ball and Dr James Perkins securing a benchtop SEM from Hitachi, which will be available to schools when COVID allows. We have also continued to forge closer ties with our colleagues in diagnostic electron microscopy, represented on the committee by Dr Anton Page, and moving forward the RMS will be assisting ACEM with administration of the society.

In our last section meeting, we welcomed new member to the EM Section – Dr Jenny Simpson (Pirbright Institute) representing the Early Career Section. We also welcomed Dr Chris Guerin to attend the section, as he will be reviewing the existing EM timeline, filling any gaps and translating it to a more interactive online tool ahead of the one-hundred-year anniversary of the invention of the electron microscope. We continue to have representation on the section from a number of more focused groups on the committee including the SEMT, the Cryo Microscopy Group, EM-UK and local EM networks.

As I step down as chair of the section, I would like to offer my heartfelt thanks to Allison and the RMS team for all their support and advice - they have been a pleasure to work with and have made my job easy! Also, to my co-chair Thomas Walther and to the whole section, who are an extremely dynamic and engaged group - section meetings are never boring! I also have the pleasure of passing over the reins to two distinguished imaging scientists, Professor Asa Barber (London Southbank University) and Dr Becky Thompson (University of Leeds), and so I know that the section is in very safe hands. Wishing you all a happy and safe year and looking forward to more microscopy in less challenging times!