I am Genevéve Marx and currently a 2nd year PhD student at the Centre for HRTEM at Nelson Mandela University (NMU), Port Elizabeth. The supervisors of my PhD project are Dr Johan Westraadt and Prof Jan Neethling. The title of my PhD project is "Microstructural Evolution of Welded Creep Aged CSEF Steel" and it entails the quantitative measuring of the microstructure of creep strength enhanced ferritic (CSEF) steels that have been in use in coal-fired power plants and welded on. These results is used as input into creep models that can be implemented to predict more accurately the remaining life of the power plant components made of these steels.

What an honor it was to win the prestigious ALS/JEOL award for the "Most Promising Microscopist" at the 54th Annual Microscopy Society of Southern Africa (MSSA 2016) conference held in Port Elizabeth. I honestly did not expect it. Winning the top award at this conference was particularly special to me since Port Elizabeth is my hometown and I had my husband in the seat right next to me when they announced my name at the MSSA Gala Dinner. At the time, I was a 1st year PhD in Physics student and it had been my 3rd MSSA conference I have attended. At the MSSA 2014 conference, I have been fortunate enough to win the Scientific Group Prize for "Best Paper on an Innovative Microscopy Technique" based on results I had presented on my MSc research. Therefore, it was rewarding to have won this amazing award based on results from my PhD project that I had presented at MSSA 2016. The title of the talk I presented at MSSA 2016 was "Quantitative Microstructural Evaluation of a 12% Cr Creep Aged Power Plant Steel". During this talk, I illustrated the techniques I use for my PhD project to measure specifically the different dislocation densities, which is part of the microstructure, in a 12% Cr CSEF steel.

What made this award exceptional was the fact that the prize was an all-expenses paid trip to any international conference sponsored by ALS and JEOL UK. Since I always have wanted to travel to the UK, the conference I chose to attend was the Microscience Microscopy Conference 2017 (mmc2017) held in Manchester, UK from 3 to 6 July 2017. The Manchester Convention Complex hosted the conference and incorporated the EMAG (Electron Microscopy and Analysis Group). The conference website stated that mmc2017 will be "big and as bold as ever with six parallel conference sessions, an exhibition with more than 100 companies represented, and a brilliant selection of features such as pre-event workshops and turn-up-and-learn training opportunities". They definitely didn't exaggerate. This conference is any upcoming microscopist's dream! Not only could you learn by listening to presentations presented by top researchers in the field of microscopy, but there were also mini-lectures presented by industry experts that offered insights into new products and provided advice on common issues and questions, as well as dedicated learning zones that hosted a range of instruments with experts that offered hands-on demonstrations and answered any questions you may have. In addition, this conference hosted Europe's Largest Microscopy and Imaging Exhibition for 2017. The vast amount of spesialised microscopy equipment displayed at this exhibition astounded me. It truly was a plus point to have gained insight into the current top equipment available on the market for microscopy.

At the conference, I presented a poster with the title "Quantitative Evaluation of the Secondary Phase Particles in Welded 12% Cr Creep Aged Steel". My poster illustrated the use of EFTEM Tomography to 3 dimensionally quantitatively analyse the strengthening precipitates in a 12% Cr CSEF steel used in coal-fired power plants. My poster was well received and the responses from fellow researchers qualified my research.

I was also able to attend a Pre-Congress workshop on “Image Processing and Simulation of High Resolution STEM/TEM Data”. During this workshop I got hands-on experience with the use of four different softwares relating to the processing and simulation of high rreoslution STEM/TEM images.

To enrich the whole experience, JEOL UK booked me into one of the best 5-star rated hotels in Manchester for the duration of the conference, the Radisson Blu Edwardian Manchester hotel, which is situated across from the conference venue. My room had the most beautiful view of Manchester. The ALS and JEOL UK team spoiled me even more and took me out for dinner. The one night I had the best pasta ever at one of the top-rated Italian restaurants and another night we went to a Chinese restaurant where I had duck and lobster for the first time. During these occasions I had the chance to meet and talk to the people from the ALS and JEOL UK team and also top professors from various universities. I really felt spoilt throughout my whole stay in Manchester. Fortunetaly, I could afford time to do some sight seeing of central Manchester. The architecture of the buildings are stunning.

In addition to attending the conference, I was fortunate enough to visit two top electron microscopy facilities of the UK, which are also Centre for HRTEM collaborators, namely: the Electron Microscopy Centre and Materials Science Centre situated at the University of Manchester and the electron Physical Science Imaging Centre (ePSIC) located on the Harwell Science and Innovation Campus in Oxfordshire. Professor Grace Burke, the director of the Materials Performance Centre at the University of Manchester, hosted me at the University of Manchester, and Professor Angus Kirland, the science director at ePSIC and professor at Univeristy of Oxford, hosted me at ePSIC. It was very exciting to see all the state-of-the-art electron microscopes held at these facilties, including the JEOL JEM-ARM200F double Cs-corrected TEM at ePSIC. In addition, Professor Kirkland took me on a tour of Diamond Light Source, which is the UK’s national synchrotron science facility. Both these professors made me feel so welcome and I am grateful to them for taking the time out of their busy schedules to host me.

Since I needed to travel to Harwell after the conference, I used the oppurtunity to extend my stay to London for a few days. I made sure I was a true tourist and visited all the top London attractions which included Big Ben, Westminster Abbey, Tower of London and Buckingham Palace. A boat cruise on the River Thames was the best. To ensure I truly experienced London fully, I went to watch a stage perfomance, namely “Stomp”. Words cannot jusitfy the quality of this show.

And so my UK trip came to an end with 1500 photos to encapsulate every memory. Reflecting back, I know that the whole experience has further developed me as an electron microscopist and that which I have learnt I can use to enhance my PhD research. Therefore, I would like to thank the sponsors ALS and JEOL UK for providing me with one of the most memorable experiences in my life. Words cannot express my gratitude for the opportunities this trip has given me. The fact that these big companies invest in upcoming researchers shows that their vision is not to only develop the best technology, but also the best researchers in the fields of microscopy. A special thank you to my supervisors for their support, and Mr Dave Perrett (ALS), Mr Jason Dalby (JEOL UK), Ms Sarah Karimi (JEOL UK), Ms Amy Stobart (JEOL) and Ms Marisa Kolver (NMU) for the organisation and handling of the logitisitcs of my trip. I also would like to

acknowledge the contributions from NMU and the National Research Foundation. Lastly, the biggest thank you goes to the MSSA 2016 organising committee since without the MSSA conference there would have been no award to have been won.

Figure 1: Myself and from left Mr Shaun Quill (Managing Director and Sales Director of JEOL UK), Mr Jason Dalby (JEOL UK) and Mr Dave Perrett (Sales/Marketing Director of ALS) at the MSSA 2016 Gala Dinner after I had won the award.

Figure 2: Prof Grace Burke and myself at the entrance to University of Manchester's Materials Performance Centre.

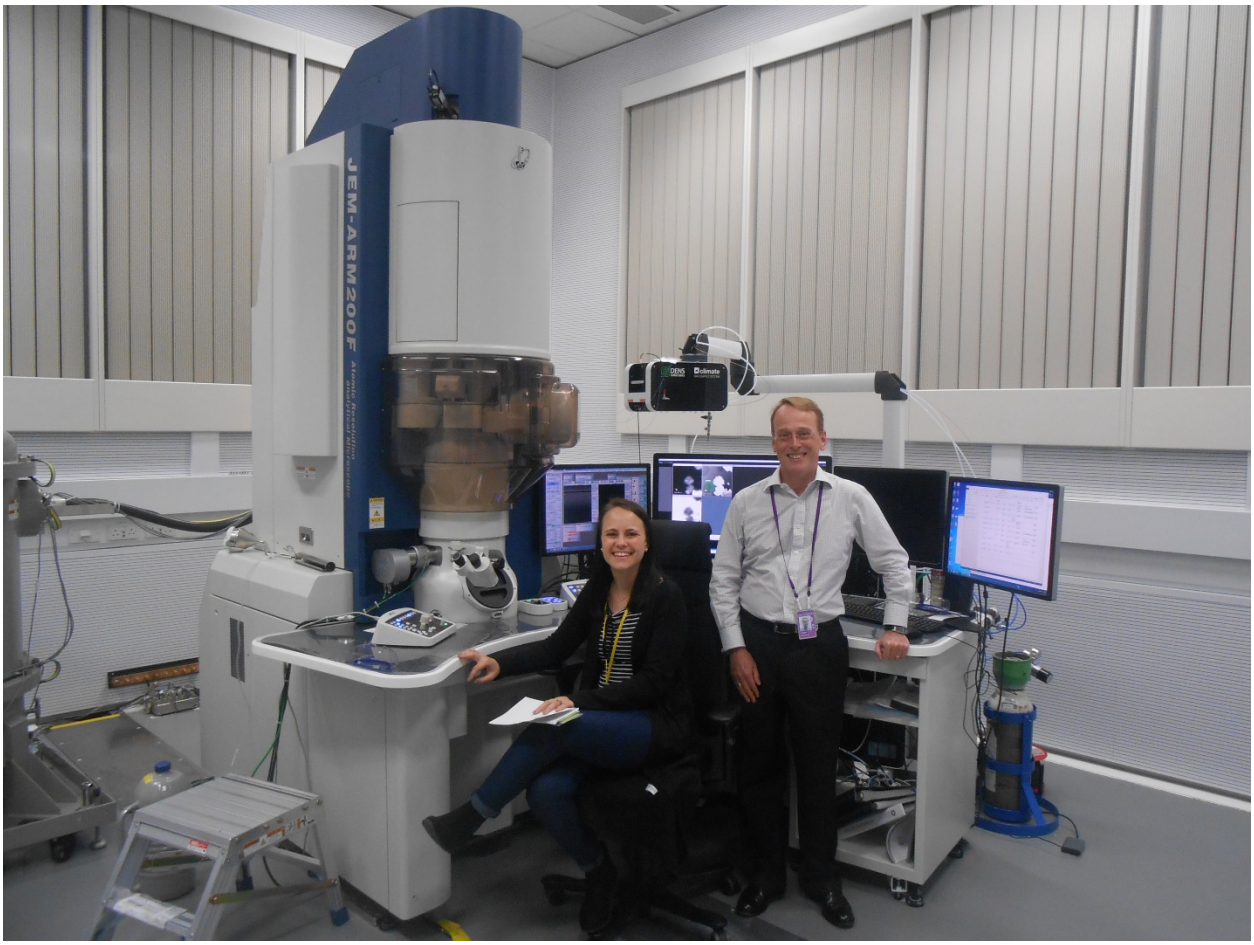

Figure 3: Prof Angus Kirkland and I standing at JEOL JEM-ARM200F double Cs-corrected TEM at ePSIC.

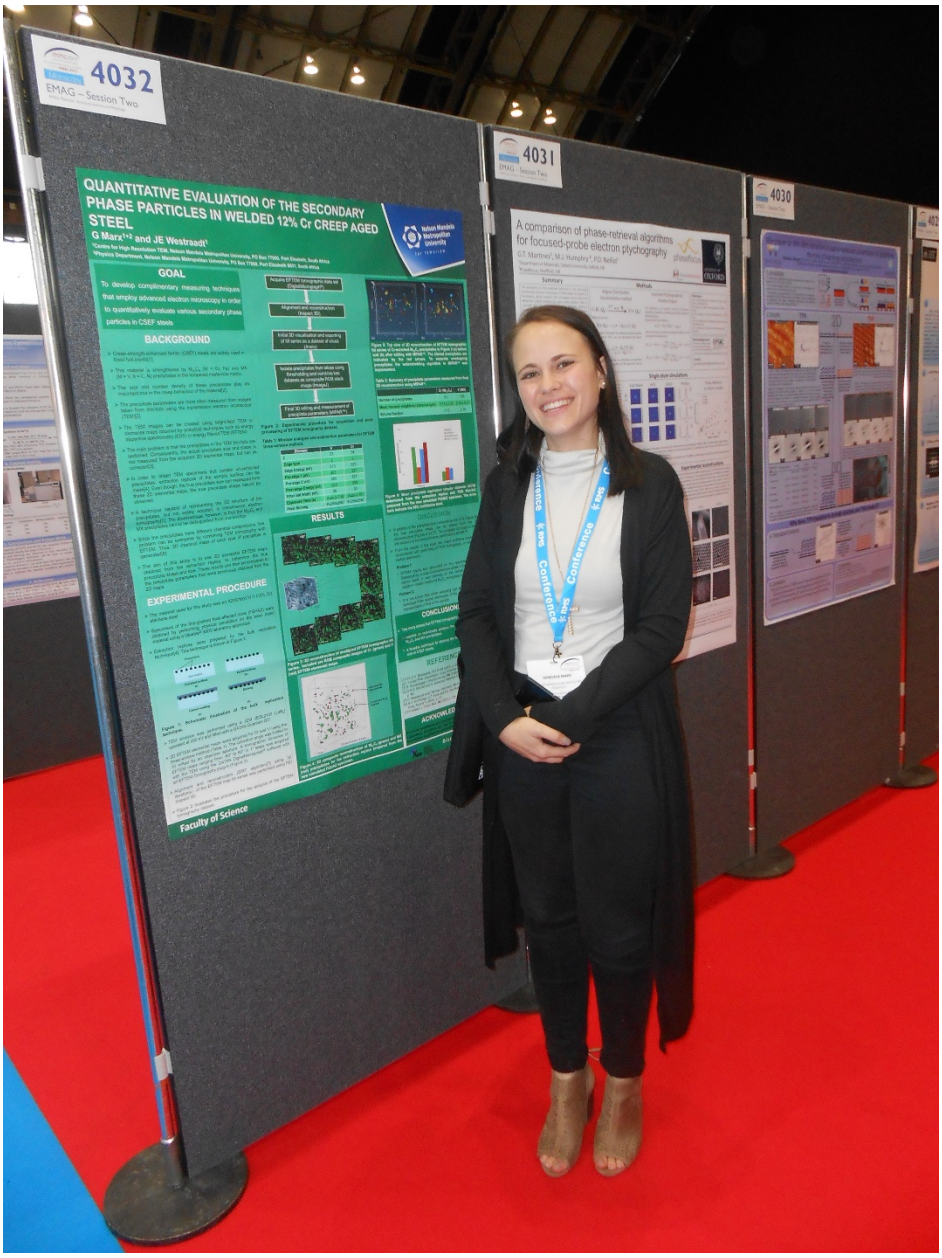

Figure 4: Myself standing at the poster I presented at mmc2017.

Figure 5: Mr Dave Perrett (Sales/Marketing Director of ALS) and myself standing in front of the JEOL stand at the mcc2017 incorporating EMAG exhibition.

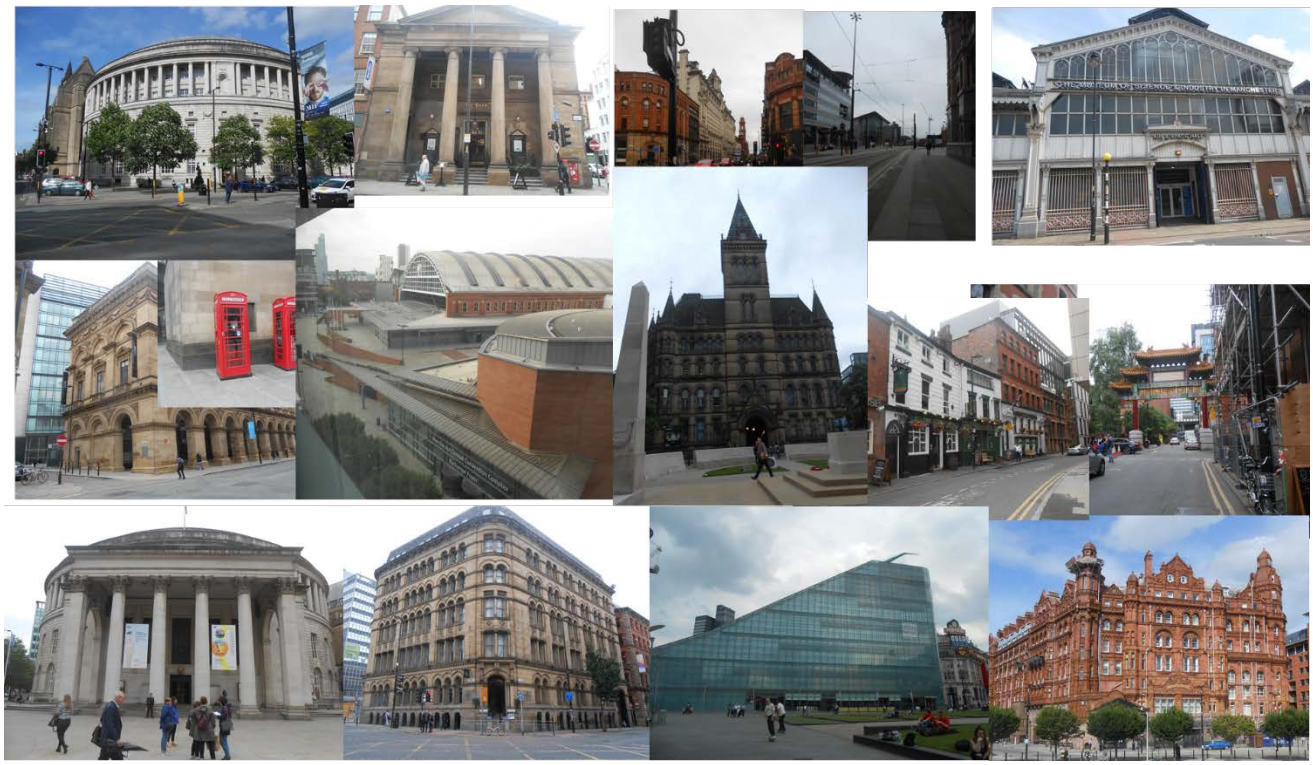

Figure 6: Collage of some of my Manchester site seeing.