

**Tuesday
11 September 2018**

17:10	783: Latest Developments for Advanced 3D EBSD Mr Fabián Pérez-Willard Carl Zeiss Microscopy GmbH	Instrumentation and Techniques (IT6 - Diffraction techniques)	21: Unlocking the distribution of fluorescently labeled albumin in zebrafish Ms Delfine Cheng The University of Sydney	Life Sciences (LS-5 - Cellular Transport & Dynamics)	1508: Study of crystalline and shape anisotropy competition in magnetic nanostructures by electron holography and crystal orientation mapping Prof Arturo Ponce University of Texas at San Antonio	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	309: 3D characterization of precipitates in N-added austenitic stainless steel using FIB-SEM tomography Prof Kenji Kaneko Kyushu University	Physical Sciences (PS4 - Metals and alloys)	17:10
17:15	973: Quantitative Diffraction Methods in the Scanning Electron Microscope Mr Sam Fairman Humboldt-Universität zu Berlin	Instrumentation and Techniques (IT6 - Diffraction techniques)	15: TB in 3D: A novel approach to quantifying tuberculosis infection in three dimensions using Mesoscopy and optical clearing techniques Dr Robert Francis Biological Imaging Group, National Institute of Biological Standards and Control (NIBSC), MHRA	Life Sciences (LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling)	1416: Building blocks of marine calcifiers foraminifera as examples of nano to macroscale arrangements in biominerals Dr Aleksey Sadekov The University of Western Australia	Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)	194: Transmission electron microscopy study on the precipitation behavior of MC carbide in a V and Mo - containing high Mn steel Prof Yoon-Uk Heo Pohang University of Science and Technology	Physical Sciences (PS4 - Metals and alloys)	17:15
17:20	868: Isotropic Debye-Waller factor measurements for Cu, SrTiO ₃ and GaAs using digital electron diffraction Mr Alexander Hubert University of Warwick	Instrumentation and Techniques (IT6 - Diffraction techniques)	53: Atom Probe Tomography Study of Electrically Characterised Defects in Gettered High Performance Multicrystalline Silicon Mr David Tweedle University of Oxford	Physical Sciences (PS7 - Semiconductors and materials for communication)	1491: Experimental Clay Mineralogy in Electron Microscopy Dr Wen-An Chiou University of Maryland	Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)	57: Sympathetic nucleation of GP zones of θ' precipitates in an Al-3.6Cu-0.9Li aluminium alloy Mr Tsai Fu Chung Department of Materials Science and Engineering, National Taiwan University	Physical Sciences (PS4 - Metals and alloys)	17:20
17:25	1307: STEM Tilt Series for Tomography in Scanning Electron Microscope Mr Fabián Pérez-Willard Carl Zeiss Microscopy GmbH	Instrumentation and Techniques (IT7 - Multi-scale 3D imaging)	951: Atomic composition of the SiC/graphene structure obtained by high-temperature sublimation process A/Prof Martial Duchamp Nanyang Technological University	Physical Sciences (PS7 - Semiconductors and materials for communication)	1158: Operando observation of electrode reactions in a solid oxide fuel cell by an environmental high-voltage electron microscope A/Prof Takafumi Ishida Institute of Materials and Systems for Sustainability, Nagoya University, Global Research Center for Environment and Energy base on Nanomaterials Science	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	175: Complex Architectures in High-Entropy Superalloy: A Study by Using Atom Probe Dr Hung-Wei Yen Department of Materials Science and Engineering, National Taiwan University, Advanced Application Centre for Microscopy & Microanalysis	Physical Sciences (PS4 - Metals and alloys)	17:25
17:30	777: Sample Preparation Technique with Electric Nano-Shield Films for In-Situ Electron Holography of Battery Materials Dr Kazuo Yamamoto Japan Fine Ceramics Center	Instrumentation and Techniques (IT8 - Phase-related imaging techniques)	1212: Confined femtosecond laser modification of Si: a new pathway to induce phase transformation Mr Lachlan Smillie Research School of Physics and Engineering, The Australian National University	Physical Sciences (PS8 - Phase transformations and corrosion)	100: Thermally and Electrochemically Promoted Cathode/Electrolyte Interfaces in Solid Oxide Fuel Cells Mr Shuai He Fuels and Energy Technology Institute & Department of Chemical Engineering, Curtin University	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	1439: Helium Bubble Behaviour in a Lattice-Damaged FCC Metal Ms Kathryn Yates Imperial College London	Physical Sciences (PS4 - Metals and alloys)	17:30
17:35	280: Nanostructure of multifunctional and ultra-thin FeCo/TiN (bilayer period $\lambda \approx 2.3$ nm) multilayer thin films Mr Niklas Wolff Institute for Materials Science, CAU Kiel	Physical Sciences (PS3 - Thin films, coatings and surfaces)	1151: Algorithm for Parent Phase Reconstruction (PPR) from EBSD Dataset Mr Cheng-Yao Huang Department of Materials Science & Engineering, National Taiwan University	Physical Sciences (PS8 - Phase transformations and corrosion)	184: Atomic-scale characterization of electrode materials by STEM Prof Lin Gu Institute of Physics, Chinese Academy of Sciences	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	1017: Characterization of Point and Extended Defects in β -Ga ₂ O ₃ Mr Jared Johnson The Ohio State University	Physical Sciences (PS5 - Ceramics and inorganic composites)	17:35
17:40	1145: Nanostructure and Self-Assembly in Copolymers and Copolymer Films A/Prof Kevin Jack Centre for Microscopy and Microanalysis, The University of Queensland	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	1302: Spectral and structural properties of unique low dimensional amorphous carbon structures Dr Michael Kinyanjui Central Facility of Electron Microscopy, University of Ulm	Physical Sciences (PS9 - Amorphous and disordered materials, liquid crystals)	393: Puzzling diffusion behavior in N-doped Cu(In,Ga)Se ₂ thin films revealed by APT, STEM, SIMS, and nano-AES analysis Dr Torsten Schwarz Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)			17:40
17:45	1543: 3D Electrospinning for Biomedical Applications Dr Wiwat Nuansing School of Physics, Institute of Science, Suranaree University of Technology, SUT CoE on Advanced Functional Materials (SUT-AFM), Suranaree University of Technology	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	176: Single Particle Tracking in Lyotropic Liquid Crystals Mr Joshua Marlow Monash University	Physical Sciences (PS9 - Amorphous and disordered materials, liquid crystals)	663: Direct observation of oxygen lattice distortions in charged lithium-rich layered cathodes by annular bright-field imaging in STEM Dr Emanuela Liberti Department of Materials, University of Oxford	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)			17:45
17:50			754: Directed Differentiation of Functional Cholangiocytes from Human Mesenchymal Stem Cells Dr Haolu Wang The University of Queensland Diamantina Institute	Life Sciences (LS-1 - Structure and Function of Cells & Organelles)	647: Importance of co-catalyst dispersion in Pt-functionalized graphitic carbon nitrides for solar fuel generation Prof Peter Crozier Arizona State University	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)			17:50
17:55			991: Nucleolar chromatin - a microscopy-based approach Prof Christian Schöfer Dept. for Cell and Developmental Biology	Life Sciences (LS-1 - Structure and Function of Cells & Organelles)					17:55

	Mini Oral Theaterette 1	Theme	Mini Oral Theaterette 2	Theme	Mini Oral Theaterette 3	Theme	Mini Oral Theaterette 4	Theme	
12:45	746: Photogrammetry to create 3D images from a 2D scanning electron microscope Dr Marina Richena Agresearch Limited	Instrumentation and Techniques (IT7 - Multi-scale 3D imaging)	792: The German Network of Electron Microscopy Groups (IGEME) Dr Dirk Berger Technische Universität Berlin, Center for Electron Microscopy (ZELMI)	Frontier Issues (FI3 - Facility management)	73: Tailoring of surface plasmon resonances in TiN/AlScN superlattices for applications in energy-harvesting devices Dr Magnus Garbrecht Thin Film Physics Division, Linköping University	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	1576: Phase Precipitation in Ti-Mo-Fe Alloys Investigated by Scanning and Transmission Electron Microscopy Prof Rubens Caram School of Mechanical Engineering, University of Campinas (UNICAMP)	Physical Sciences (PS4 - Metals and alloys)	12:45
12:50	824: Evaluation of residual stresses by use of dual beam SEM Prof Marek Faryna Institute of Metallurgy and Materials Science, Polish Academy of Sciences	Instrumentation and Techniques (IT10 - SEM, FIB, scanning probe and surface microscopy)	907: Imaging Bacterial Colonies and Phage-bacterium Interaction at Sub-nanometer Resolution Using Helium Ion Microscopy Mr Miika Leppänen Nanoscience Center, Department of Physics, Department of Biological and Environmental Science, University of Jyväskylä	Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)	993: HAADF STEM imaging of new spinel-like phases in Ni-rich layered oxide Li-ion cathode materials Prof Frederic Cosandey Department of Materials Science and Engineering, Rutgers University	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	106: Influence of crystallographic orientation on the mechanical behaviors and microstructural evolution in a Mg alloy Mr Peng Gao Peking University	Physical Sciences (PS4 - Metals and alloys)	12:50
12:55	471: Real-space cathodoluminescence imaging of silver nanowaveguides Dr Amelia Liu Monash Centre for Electron Microscopy and School of Physics and Astronomy, Monash University, Clayton	Instrumentation and Techniques (IT13 - Spectroscopy - Low energy excitations and ultrafast spectroscopy)	1092: Life off the grid - case studies and cautionary tales from structural biology in solution Mr Lachlan Casey Centre for Microscopy and Microanalysis, School of Chemistry and Molecular Biosciences, University of Queensland	Life Sciences (LS-3 - 3-D Structures of Macromolecules & Supramolecular Assemblies)	919: Nanomechanics of dislocations and interfaces revisited with new dedicated in-situ TEM tensile method Prof Dominique Schryvers University of Antwerp, EMAT group	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	1203: Non-destructive characterization of porosity distribution in additively-manufactured metal components Dr Sam Yang CSIRO	Physical Sciences (PS4 - Metals and alloys)	12:55
13:00	29: Computational tools for the atom-scale analysis of quasicrystals using atom probe microscopy Dr Anna V.Ceguerra The University of Sydney	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	215: Selective modulation of TNF receptor 2 (TNFR2) promotes renal cancer stem cell survival Dr RAFIA AL-LAMKI University of Cambridge	Life Sciences (LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling)	764: Correlation between nanoscale mechanical strain and electron transport in individual INAs nanowires Prof Eva Olsson Chalmers University of Technology	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	625: The long-term ageing process of alloy 2618A Dr Christian Rockenhäuser Bundesanstalt für Materialforschung und -prüfung (BAM)	Physical Sciences (PS4 - Metals and alloys)	13:00
13:05	933: Secondary Ion Mass Spectrometry on the Helium Ion Microscope: High Sensitivity coupled with High Lateral Resolution Dr Santhana Eswara Luxembourg Institute of Science and Technology	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	1446: Hall-Petch behaviour of nanostructured lamellar Cu-Mo composites produced by high-pressure torsion Dr Julian Rosalie Erich Schmid Institute of Materials Science, Austrian Academy of Sciences	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	935: TEM characterization of BN films grown on metallic substrates by CVD Dr Frédéric Fossard LEM, Laboratoire d'Etude des Microstructures, ONERA/CNRS	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	1127: Probing Oxygen Environments Associated with High Solute Grain Boundary Complexions in Ceria Ceramics with EELS Prof Peter Crozier Arizona State University	Physical Sciences (PS5 - Ceramics and inorganic composites)	13:05
13:10	1310: Three-beam electron diffraction for measuring crystallographic phases Dr Yueying Guo Monash University	Instrumentation and Techniques (IT6 - Diffraction techniques)	1477: In Pursuit of Safe Water in East Africa: Bringing Together Advanced Spectroscopy and Microscopy Techniques to Solve a Longstanding Mystery Mr Daniel Mosiman University of Illinois at Urbana-Champaign	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	1451: Electron microscopy analysis on a few-layer graphene oxide modified with silicon. Prof J. Ysmael Verde Gómez TECNM / Instituto Tecnológico de Cancún	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	1542: Interphase-interface characterization of novel engineered bio-composite systems with Scanning Electron Microscopy Ms Claudia Echeverria Centre for Sustainable Materials, School of Materials Science & Engineering Faculty of Science, University of New South Wales, Research and Technology (SMART)	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	13:10
13:15	995: Precession Diffraction Based Strain Mapping in STEM and SEM Dr Benedikt Haas Humboldt-Universität zu Berlin	Instrumentation and Techniques (IT6 - Diffraction techniques)	1009: Mechanistic study of formation of ultra-thin single crystalline Pt nanowire and its alloys Miss Debadarshini Samantaray Materials Research Center, Indian Institute of Science	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	1106: Time-of-Flight Secondary Ion Mass Spectrometry (ToF-SIMS) for Imaging Composition and Functional Properties of Surfaces Prof Ivan Kempson University of South Australia	Physical Sciences (PS3 - Thin films, coatings and surfaces)	481: Low dose, high resolution analytical transmission electron microscopy Prof Rik Drummond-Brydson School of Chemical and Process Engineering, University of Leeds	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	13:15
13:20	115: TEMtilt: a tool for calculating tilt angles on a double-tilt stage Mr Niels Cauteris SCK-CEN	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	1358: Diffraction contrast suppression in Lorentz microscopy by application of fast pixelated detector imaging in STEM Dr Matus Krajnak Department of Materials Engineering, Monash University	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	1426: Multi-scale analysis of sputtered amorphous carbon film under various deposition condition using transmission electron microscopy Mr Kuntae Kim Department of Materials Science and Engineering, Seoul National University	Physical Sciences (PS9 - Amorphous and disordered materials, liquid crystals)	818: Exploring the internal structure of pyramidal quantum dots Dr Kristina Holsgrove Queen's University Belfast	Physical Sciences (PS7 - Semiconductors and materials for communication)	13:20
13:25	219: AC-HRTEM vs AC-STEM for imaging of electron sensitive zeolites Dr Kaname Yoshida Japan Fine Ceramics Center	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	396: Towards mapping the 3D-modulated spin texture of skyrmions in thin helimagnets Mr Sebastian Schneider IFW Dresden, TU Dresden	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)			924: Microstructure and Microanalysis of Zn-Mg Alloys and Their Corroded Surface after Anodic Polarization in Potassium Hydroxide Solution Dr Sankum Nusen Department of Industrial Chemistry, Faculty of Science, Chiang Mai University	Physical Sciences (PS8 - Phase transformations and corrosion)	13:25
13:30	1269: Using High-precision STEM Imaging to Measure Local Quantitative Atomic-resolution Strain in Supported Nanocatalysts Dr Andrew Yankovich Chalmers University of Technology	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	796: Structural origin of high piezoelectricity at phase boundary: nanoscale phase coexistence and gradual polarization rotation Mr Haijun Wu National University of Singapore	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)					13:30
13:35			1497: Stable isotope labelling and imaging mass spectrometry as a tool to investigate mineral-fluid interaction Prof Matt Kilburn University of Western Australia	Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)					13:35
13:40									13:40
13:45									13:45

**Wednesday
12 September 2018**

	Mini Oral Theaterette 1	Theme	Mini Oral Theaterette 2	Theme	Mini Oral Theaterette 3	Theme	Mini Oral Theaterette 4	Theme	
16:15	1873: Engineering Innovation Throughout Life and Across Cultures - Advancing STEAM Outreach Through Indigenous Paradigms, Industry Engagement, and Microscopy Aided Design And Manufacture (MADAME) Prof Melissa Knothe Tate University of New South Wales	Frontier Issues (F11 - Outreach)	220: Investigation of parameters that influence the performance of a hole-free phase plate and its application on a carbon nanotube sample Ms Rebecca Pretzsch Karlsruhe Institute of Technology - Laboratory for Electron Microscopy	Instrumentation and Techniques (IT8 - Phase-related imaging techniques)	110: Atomic Scale Insights into Phase Coexistence in Ternary Transition Metal Chalcogenides by Cross-Sectional (S)TEM Imaging Dr Yi-Chao Zou The University of Queensland, The University of Manchester	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	368: Hidden defects and unexpected properties of graphene - How advanced TEM contributes to materials development Prof Benjamin Butz Micro- and Nanoanalytics and Tomography Group & Micro- and Nanoanalytics Facility (MNAF), University of Siegen, D-57076 Siegen	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	16:15
16:20	360: An aberration corrector for scanning electron microscopes using miniature electron mirrors Prof Pieter Kruit Delft University of Technology	Instrumentation and Techniques (IT1 - Instrumentation)	445: Optimizing the sampling parameter in STEM Moiré interferometry for 2D strain field characterization Mr Alexandre Pofelski McMaster University	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	1254: Titanyl sulfate as template for preparation of 1D titania structures Dr Mariana Klementova Institute of Physics of the Czech Academy of Sciences	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	518: Linking cationic distribution and growth kinetics in δ-doped superconducting La ₂ CuO ₄ heterostructures Mr Y. Eren Suyolcu Max Planck Institute for Solid State Research	Physical Sciences (PS3 - Thin films, coatings and surfaces)	16:20
16:25	669: Ga ion-induced damage on FIB-prepared TEM specimens and its removal using narrow argon ion milling Dr Matthias W. Stumpf	Instrumentation and Techniques (IT10 - SEM, FIB, scanning probe and surface microscopy)	472: Elements of quantitative ADF imaging for crystallography; quantitative, precise and reproducible methodology Dr Koji Kimoto National Institute for Materials Science	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	89: Nanoporous platinum doped cerium oxides thin films: Ionic platinum localization and stability A/Prof Valerie Potin ICB UMR6303 CNRS Université de Bourgogne-Franche Comte	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	963: Helium detection by elastic scattering in EELS Dr Michael Walls Université Paris-Sud	Physical Sciences (PS4 - Metals and alloys)	16:25
16:30	162: EELS + DFT on the study of oxygen deficient α-Bi ₂ O ₃ Miss Catalina Coll University of Barcelona	Instrumentation and Techniques (IT12 - Spectroscopy – High energy excitations and local chemical analysis)	646: STEM imaging of the third dimension using Laue zone scattering at atomic resolution Dr Ian MacLaren University of Glasgow	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	1185: Local lattice strain in gold nanoparticles depending on their outer shapes Mr Kohei Aso Kyushu University	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	169: Characterisation and Mechanical Properties of Stainless Steel Matrix Composites Reinforced with (Nb _x Ti _{1-x})C Particles Mr Wen Hao Kan Australian Centre for Microscopy and Microanalysis, The University of Sydney	Physical Sciences (PS4 - Metals and alloys)	16:30
16:35	1083: Secondary Electron Spectroscopy for Beam-Sensitive Materials - Examples, Challenges and Outlook Miss Nicola Stehling Department of Materials Science and Engineering, University of Sheffield	Instrumentation and Techniques (IT12 - Spectroscopy – High energy excitations and local chemical analysis)	1410: Real Time Acquisition and Calibration of S/TEM Probe Current Measurement Simultaneously with Any Imaging or Spectroscopic Signal Prof Judy Yang University of Pittsburgh	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	733: Plasmon resonances in Magnesium nanoparticles Dr Emilie Ringe University of Cambridge	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	1340: Investigating the Spall and Quasi-Static Tensile Responses of Commercial Lean Duplex Stainless Steel Alloys Mr Ali Ameri University of New South Wales-Canberra	Physical Sciences (PS4 - Metals and alloys)	16:35
16:40	213: Energy-momentum cathodoluminescence microscopy for nanophotonics Dr Toon Coenen Delmic BV, Delft	Instrumentation and Techniques (IT13 - Spectroscopy – Low energy excitations and ultrafast spectroscopy)	600: Determine the concentration of DNA interacting Doxorubicin in Vivo Miss Ying Zhou Institute of Physical Chemistry of the Polish Academy of Sciences	Life Sciences (LS-1 - Structure and Function of Cells & Organelles)	1515: Characterisation of Advanced Magnetic Materials using Atomic Force Microscopy Dr Yin Yao Electron Microscope Unit, Mark Wainwright Analytical Centre, The University of New South Wales	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	483: Dislocation structures in creep-deformed nickel-based single crystal superalloys Prof Kui Du Institute of Metal Research, Chinese Academy of Sciences	Physical Sciences (PS4 - Metals and alloys)	16:40
16:45	681: Experimental Protocols for Observation of Hydrogen Trapping in Atom Probe Tomography Dr Yi-Sheng Chen The University of Sydney	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	805: Alterations of mineralized matrix in the cultured bone model caused by Pb exposure Dr Suwimon Boonrungsiman National Nanotechnology Center (NANOTEC), NSTDA, 111 Thailand Science Park, Pathum thani	Life Sciences (LS-1 - Structure and Function of Cells & Organelles)	499: Quantitative measurements of magnetic states in patterned permalloy disks using off-axis electron holography and model-based reconstruction of magnetisation Ms Teresa WeBels Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons and Peter Grünberg Institute, Forschungszentrum Jülich	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	1526: Nanoscale mapping of FeAl-based alloys using nanoindentation and AFM A/Prof Vilma Bursikova Masaryk University, Faculty of Science	Physical Sciences (PS4 - Metals and alloys)	16:45
16:50	972: Elimination of focused ion beam-induced damage from atom probe specimens by small beam, low energy, argon ion milling Dr Matthias W. Stumpf E.A. Fischione Instruments, Inc.	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	882: Analytical electron microscopy of calcium carbonates and calcium phosphates in crustacean calcium bodies Dr Vesna Srot Max Planck Institute for Solid State Research, Stuttgart	Life Sciences (LS-13 - Invertebrate Biology & Taxonomy)	855: Exploring domains compatibility in polycrystalline ferroics Dr Miryam Arredondo Queen's University Belfast	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	626: Influence of heat treatment and creep loading on the microstructure of an Al-Cu-Li alloy Dr Christian Rockenbauer Bundesanstalt für Materialforschung und -prüfung (BAM)	Physical Sciences (PS4 - Metals and alloys)	16:50
16:55	1480: Implementation of Correlative TEM Information into Atom Probe Reconstruction Routines Prof Brian Gorman Colorado School of Mines	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	1149: Imaging of antibacterial activity of polymeric particles for drug delivery systems using scanning transmission electron microscopy Dr Chisato Takahashi Aichi Gakuin University	Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)	425: In situ Lorentz differential phase contrast scanning transmission electron microscopy of bilayer SrRuO ₃ /SrO ₃ films hosting the skyrmion phase Prof David McComb Center for Electron Microscopy and Analysis, The Ohio State University	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	376: Atom Probe Study of Microstructural Features Affecting Mechanical Properties and Delamination Cracking of Annealed Hyper-eutectoid Steel Wires Dr Majid Jafari Bahramabadi Pohang University of Science and Technology (POSTECH), Pohang 790-784, South Korea	Physical Sciences (PS4 - Metals and alloys)	16:55
17:00	672: Statistical Hypothesis Testing of the Number of Chemical Components in Spectrum Image Data Dr Motoki Shiga Gifu University, Japan Science and Technology Agency	Instrumentation and Techniques (IT2 - Computational methods for data acquisition, analysis and visualisation)	767: Comparative nuclear localisation of African horse sickness virus non-structural protein NS4 across all serotypes Miss Shareen Boughan University of Pretoria	Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)	1605: Crystallization pathways in carbonate archives of climate change Miss Valentina Vanghi University Of Newcastle	Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)	725: Application of Electron Channeling Contrast Image on Analysis of Dislocation Structures Induced by Indentation in Nickel Single Crystal Miss Fei Ya Huang National Cheng Kung University	Physical Sciences (PS4 - Metals and alloys)	17:00
17:05	262: Integrated AFM in SEM - Correlating Electron Micros and Associated Analysis Techniques with 3D Imaging Data Dr Andrew Jonathan Smith Kleindiek Nanotechnik	Instrumentation and Techniques (IT3 - Methods and workflows for correlative microscopy)	1091: Imaging approaches to understand the effects of bisphosphonate drugs on macrophages outside the skeleton Dr Marcia Munoz Bone Biology Division, Garvan Institute	Life Sciences (LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms)	1229: Direct Observation of Atomic Ordering in PrBaCo ₂ O _{5+δ} Layered Perovskite Oxide Mr Ohhun Kwon Ulsan National Institute of Science and Technology	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	829: Comparison of Different Methods for Large Volume 3D EBSD Analysis of Dual-Phase Steel Dr Michael Hassel-Shearer Gatan, Inc.	Physical Sciences (PS4 - Metals and alloys)	17:05

**Wednesday
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17:10	1821: Electron Crystallography for Studying Protein Structures from Micron- and Nano-Sized 3D Crystals Dr Hongyi Xu Department of Materials and Environmental Chemistry, Stockholm University	Instrumentation and Techniques (IT4 - Cryo-TEM techniques for biological material)	632: Electron microscopy highlights the challenges of using fluorescently-tagged proteins for cellular biology Mr Matthew Jessop CEA, IBS, F-38044 Grenoble, University Grenoble Alpes, IBS, F-38044 Grenoble	Life Sciences (LS-3 - 3-D Structures of Macromolecules & Supramolecular Assemblies)	831: Spontaneous nanostructuring of TiNiSn half-Heusler films for thermoelectric applications: a refined STEM-EELS study Mr Robert Webster University of Glasgow	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	706: Characterization of Selective Impurities Segregation in MgO Grain Boundaries using Atomic-resolution STEM-EDS Mapping Dr Mitsuhiro Saito University of Tokyo	Physical Sciences (PS5 - Ceramics and inorganic composites)	17:10
17:15	1472: Operando liquid-electrochemical TEM for monitoring the charge/discharge processes in a Na-O2 Battery Dr Arnaud Demortiere LRCS_RS2E	Instrumentation and Techniques (IT5 - In-situ, environmental and time-resolved microscopies)	773: Pushing the envelope: Novel zebrafish models for investigating neutrophil nuclear plasticity in vivo. Miss Harriet Manley Australian Regenerative Medicine Institute, Monash University	Life Sciences (LS-7 - Embryology & Developmental Biology)	27: In situ TEM studies on RRAM device and epitaxial thin films Prof Richeng Yu Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing 100190	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	1142: New Line Defect in Epitaxial BaSnO3 Miss Hwanhui Yun University of Minnesota	Physical Sciences (PS5 - Ceramics and inorganic composites)	17:15
17:20	334: An open cell environmental transmission electron microscopy technique for in situ characterization of photocorrosion of particles in aqueous solutions. Dr Barnaby Levin Arizona State University	Instrumentation and Techniques (IT5 - In-situ, environmental and time-resolved microscopies)	480: Re-engineering enzymes as dSTORM detection agents Dr Amy Davies Institute of Biological Chemistry, Biophysics and Bioengineering, Heriot-Watt University	Life Sciences (LS-8 - Pathology and Immunocytochemistry & Biomolecular Labeling)	949: Electric field in-situ TEM of metal-insulator-metal devices Dr Leopoldo Molina-Luna Technical University Darmstadt	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	1447: Element distribution at the interface of soft and hard materials. Dr Meiken Falke Bruker Nano GmbH	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	17:20
17:25	98: Thermal Expansion Coefficient Measurement from Electron Diffraction of Amorphous Films in a TEM Dr Misa Hayashida NRC Nano	Instrumentation and Techniques (IT6 - Diffraction techniques)	722: Microstructural analysis and kinetics of internal nitridation of Incoloy 800H Ms Alice Young University of Canterbury	Physical Sciences (PS8 - Phase transformations and corrosion)	776: In situ imaging of reversible order-disorder switching of a few Au atomic layers and field evaporation using atomic resolution TEM Dr Ludvig de Knoop Chalmers University of Technology	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	639: Investigating the hierarchical structure of reverse osmosis membranes - from the micro to nanoscale Dr Catriona McGilvery Imperial College London	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	17:25
17:30	693: Application of Simultaneous Energy-Filtered High-Speed 4D STEM Diffraction Imaging and EDS to Study the Strain and Elemental Distribution at the Interface Dr Anahita Pakzad Gatan Inc.	Instrumentation and Techniques (IT6 - Diffraction techniques)			1478: Directed Radiolytic Synthesis of Nanostructured Materials using in situ Liquid Cell Microscopy Dr Raymond Unocic Oak Ridge National Laboratory, Center for Nanophase Materials Science	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	203: Nanobeam diffraction strain analysis of released Ge gate-all-around horizontal nano-wires: challenges and limitations Dr Paola Favia imec	Physical Sciences (PS7 - Semiconductors and materials for communication)	17:30
17:35	1514: Structural analysis of metallic particles by electron PDF methods using an axial camera under precession electron diffraction Prof Arturo Ponce University of Texas at San Antonio	Instrumentation and Techniques (IT6 - Diffraction techniques)			144: Determination of the 3D electrostatic field in situ at electron nano-emitters Dr Mingjian Wu Institute of Micro- and Nanostructure Research & Center for Nanoanalysis and Electron Microscopy (CENEM), Department of Materials Science	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	671: Thickness-dependent Defect Evolution in GaAs-based Low-misfit Heterostructures Mr Abhinandan Gangopadhyay Arizona State University	Physical Sciences (PS7 - Semiconductors and materials for communication)	17:35
17:40	844: Evaluation of grain boundary plane distribution in yttria stabilized polycrystalline zirconia based on 3D EBSD analysis Prof Marek Faryna Institute of Metallurgy and Materials Science, Polish Academy of Sciences	Instrumentation and Techniques (IT6 - Diffraction techniques)					1450: Identifying Topological Materials for Quantum Computing Applications Prof David Bell Harvard University, Center for Nanoscale Systems, Harvard University, John A. Paulson School of Engineering and Applied Sciences	Physical Sciences (PS7 - Semiconductors and materials for communication)	17:40
17:45									17:45
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Program Grid
Mini Oral Presentations
 9 - 14 September 2018
 International Convention Centre Sydney



Thursday
13 September 2018

	Mini Oral Theaterette 1	Theme	Mini Oral Theaterette 2	Theme	Mini Oral Theaterette 3	Theme	Mini Oral Theaterette 4	Theme	
12:45	424: A "remote" future for electron microscopy facilities Prof David McComb Center for Electron Microscopy and Analysis, The Ohio State University	Frontier Issues (F13 - Facility management)	1525: High-speed visualization of soft tissues using contrast-enhanced micro-computed tomography Dr Alexander Ziegler Rheinische Friedrich-Wilhelms-Universität Bonn	Life Sciences (LS-13 - Invertebrate Biology & Taxonomy)	1022: Analysis and Comparison of Soil Phases in Forensic Practice Mr Marek Kotrly Institute of Criminalistics Prague	Physical Sciences (PS11 - Materials in geology, mineralogy and archeology)	410: Elastic strain analysis of a three-point bending for steel sheet using by EBSD-Wilkinson method. Mr Genta Maruyama JFE Techno-Research Corporation	Physical Sciences (PS4 - Metals and alloys)	12:45
12:50	179: Plan View FIB Specimen Preparation With Vacuum-Assisted ex situ Lift Out Dr Lucille Giannuzzi ExpressLO LLC	Instrumentation and Techniques (IT10 - SEM, FIB, scanning probe and surface microscopy)	994: Bacteria Degrade the Specialized Basal Lamina of the Junctional Epithelium Sealing Teeth Mr Aurélien Fouillen Université de Montréal	Life Sciences (LS-14 - Host-Pathogen Interactions, Microbiology & Virology)	565: Nano-scale origins of High Visible-light Photoactivity in ZnS/GaP Multilayer Film using High-resolution Transmission Electron Microscopy (HRTEM) Miss Pariasadat Musavigharavi School of Materials Science & Engineering, UNSW Sydney	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	242: Effect of surface treatment on the microstructure and mechanical properties of a high entropy alloy Mr Md Nazmul Hasan School of Aerospace, Mechanical & Mechatronic Engineering, The University of Sydney	Physical Sciences (PS4 - Metals and alloys)	12:50
12:55	353: Large area mapping for analysis of nanoscale carbonitride precipitates within the steel matrix Ms Bianca Sala University of Glasgow	Instrumentation and Techniques (IT12 - Spectroscopy – High energy excitations and local chemical analysis)	1564: NeuO and CDR3: fluorescent probes labeling neurons and neural stem cells from mouse subventricular zone: widefield microscopy combined with long-term live cell imaging facilitated by microfluidic perfusion and fluorescent dye reloading Dr Michael Lovelace Applied Neurosciences Program, Peter Duncan Neurosciences Research Unit, St Vincent's Centre for Applied Medical Research, Faculty of Medicine, St Vincent's Clinical School, University of NSW	Life Sciences (LS-2 - Multiplex Live Imaging of Cells, Tissues & Organisms)	478: New insights into the deactivation of fluid catalytic cracking catalysts Dr Frank Krumeich ETH Zurich	Physical Sciences (PS12 - Materials for energy production, storage and catalysis)	395: Effect of ion irradiation on austenitic stainless steel at low temperatures Mr Niels Cauteris SCK-CEN	Physical Sciences (PS4 - Metals and alloys)	12:55
13:00	1225: Modelling the dynamics of graphene encapsulation with application for atom probe tomography Mr Shi Qiu Department of Mechanical and Aerospace Engineering, Monash University	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	983: Elucidating the molecular assembly of pioneering transcription factors with nucleosomes using cryo-EM Dr Alicia Michael Friedrich Miescher Institute for Biomedical Research	Life Sciences (LS-3 - 3-D Structures of Macromolecules & Supramolecular Assemblies)	50: In situ study of electron beam induced InAs nanowires dissolution in de-ionized water by liquid cell transmission electron microscopy Prof Qing Chen Key Laboratory for the Physics and Chemistry of Nanodevices, Department of Electronics, Peking University	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	902: Characterization of precipitates in Mg alloy QE22 using advanced imaging, diffraction and spectroscopy techniques of electron microscopy Mr Xiao Jun Zhao College of Materials Science and Engineering, Chongqing University	Physical Sciences (PS4 - Metals and alloys)	13:00
13:05	1081: EIKOSTM: Design, Performance and Results of a Newly Designed Atom Probe Microscope Dr David Larson CAMECA	Instrumentation and Techniques (IT14 - Advances in Atom Probe Tomography)	1600: Microdomains at the Group B Streptococcus surface are organized in fractal structures similar to the protein patches of eukaryotic cell (macrophage) Prof Arkady Bitler Bar Ilan University	Life Sciences (LS-4 - Atomic Force Microscopy in Molecular and Cell Biology)	1037: Atom-by-Atom Nucleation of Metal Nanocrystals from a Diatomic Seed Mr Kecheng Cao Ulm University, Electron Microscopy of Materials Science	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	274: Study of the evolution of two Al-Cu (Li) alloys during thermal ageing Mr Nicolas Bello IRT Saint Exupéry	Physical Sciences (PS4 - Metals and alloys)	13:05
13:10	978: Electron-Beam Induced Fluorescence Superresolution in Integrated Correlative Light and Electron Microscopy Ms Aditi Srinivasa Raja Delft University of Technology	Instrumentation and Techniques (IT3 - Methods and workflows for correlative microscopy)	1893: Cryo-Electron Microscopy of cardiac thin filaments: Heart disease on a molecular level Dr Danielle Paul University of Bristol	Life Sciences (LS-6 - Applications of Cryo Electron Microscopy in Biology)	1499: A Novel Method of Investigating Wet Materials in EM Dr Wen-An Chiou University of Maryland	Physical Sciences (PS13 - Physical science applications of in-situ microscopy)	862: Residual silver in dealloyed nanoporous gold: quantitative spatial distribution and influence on structure and catalytic performance Mr Christoph Mahr University of Bremen	Physical Sciences (PS4 - Metals and alloys)	13:10
13:15	1382: Extended opportunities for diffraction imaging in FIB/SEM systems Dr Pavel Stejskal Thermo Fisher Scientific	Instrumentation and Techniques (IT6 - Diffraction techniques)	627: TEM/STEM characterizations of Ni _x P _{1-x} nano-alloys Dr Frédéric Fossard LEM, Laboratoire d'Etude des Microstructures, ONERA/CNRS	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	742: Electrical Conductance Measurement of Graphene Nanoribbons Mr Ryo Okubo Japan Advanced Institute of Science and Technology	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	1230: TEM observation of Ni ₂ Si discontinuous precipitation on Cu-Ni-Si alloy having high strength and high electrical conductivity Miss Hwangsun Kim Seoul National University	Physical Sciences (PS4 - Metals and alloys)	13:15
13:20	1105: Strategies for indexing big datasets of electron diffraction patterns for nanostructure orientation and phase mapping Prof Jian-Min Zuo University of Illinois at Urbana-Champaign	Instrumentation and Techniques (IT6 - Diffraction techniques)	458: Sn-doping effect on the structure of GaAs nanowires grown by MOCVD Mr Han Gao Material Engineering, The University of Queensland	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	543: Microscopic investigations of the growth mechanism of 2D TMD materials via a joint CVD-TEM study Mr Chuanhong Jin State Key Laboratory of Silicon Materials, School of Materials Science and Engineering, Zhejiang University	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	528: Revealing the atomic structure of bcc (112)/<111> twin boundaries by aberration-corrected STEM Dr Gilberto Casillas Electron Microscopy Centre, University of Wollongong	Physical Sciences (PS4 - Metals and alloys)	13:20
13:25	408: A quantitative method for measuring small residual beam tilts in high-resolution transmission electron microscopy Dr Wenquan Ming Hunan University	Instrumentation and Techniques (IT9 - STEM and TEM imaging)	806: Nanoscale insights into the synthesis of GaAs core-shell nanowires for water splitting applications via in situ heating in the transmission electron microscope Dr Matthieu Bugnet University of Lyon	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	1255: Direct observation on the atomic structure of 2D oxide nanosheet and its structural degradation under electron beam Miss Haneul Choi Korea Institute of Science and Technology, Yonsei University	Physical Sciences (PS2 - Carbon-based materials and 2D structures)	701: Directional distribution of metal interstitials in Nb ₂ Se ₃ compound Mr Woo-Sung Jang Department of Energy Science, Sungkyunkwan University	Physical Sciences (PS5 - Ceramics and inorganic composites)	13:25

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13:30	474: Atomic resolution STEM imaging in magnetic field free condition Mr Yuji Kohno JEOL Ltd.	Instrumentation and Techniques (I19 - STEM and TEM imaging)	87: Cesium-induced inhibition of <i>Pseudomonas aeruginosa</i> PAO 1 for Bioremediation of Wastewater Ms Go-Woon Lee Korea Institute of Energy Research	Physical Sciences (PS1 - Nanoscale, nanostructured and porous materials)	909: Electron microscopy study of octahedral tilt/hybridization/physical properties relationships in nickelate superlattices Prof Johan Verbeeck EMAT, Electron microscopy for materials science, University of Antwerp	Physical Sciences (PS3 - Thin films, coatings and surfaces)	1468: Characterizing Microcleanliness in Superelastic Nitinol Wires and Effects on Lifetime Performance Miss Janet Gbur Department of Materials Science and Engineering, Case Western Reserve University	Physical Sciences (PS6 - Biomaterials, polymers and polymer-based composites)	13:30
13:35	533: Estimation of Maturation Time for Secretory Granules in Mouse Pancreatic Islet Beta Cells by Serial Block Face Scanning Electron Microscopy Dr Richard Leapman National Institute of Biomedical Imaging and Bioengineering, National Institutes of Health	Life Sciences (LS-1 - Structure and Function of Cells & Organelles)	633: Combined microstructural and magnetic investigation of pinning force enhancement in Nb3Sn superconductors Mr Stephan Pfeiffer TU Wien	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)	1378: Interface effects on the epitaxial growth characteristics of brownmillerite SrFeO2.5 thin film grown on SrRuO3 and SrTiO3 Dr Janghyun Jo Department of Materials Science and Engineering, Seoul National University	Physical Sciences (PS3 - Thin films, coatings and surfaces)	119: Surface segregation in "W"-type quantum well heterostructures revealed by atomic resolution STEM Mr Pirmin Kuekelhan Materials Science Center and Faculty of Physics, Philipps University Marburg	Physical Sciences (PS7 - Semiconductors and materials for communication)	13:35
13:40			1050: In situ transmission electron microscopy of domain switching in ferroelectric films Dr Jonathan Peters University of Warwick	Physical Sciences (PS10 - Magnetic, ferroelectric and multiferroic materials)			1143: Electronic structure of BaSnO3 investigated by electron energy-loss spectroscopy Miss Hwanhui Yun University of Minnesota	Physical Sciences (PS7 - Semiconductors and materials for communication)	13:40
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