

[IT-16. Electron microscopy theory and simulations](#)

8 September, 17:00 - 19:00 / 9 September, 16:30 - 18:30

IT-16-P-1553

Rutherford scattering of electron vortices

Presenting author: **Van Boxem R.**

Authors: Van Boxem R., Partoens B., Verbeeck J.

IT-16-P-1689

A new approach to determine excess free volume at high-angle grain boundaries – a proof of concept

Presenting author: **Buranova Y. S.**

Authors: Buranova Y. S., Rösner H., Divinski S. V., Wilde G.

IT-16-P-1767

A Multislice Theory of Electron Scattering in Crystals including Backscattering and Inelastic Effects

Presenting author: **Spiegelberg J.**

Authors: Spiegelberg J., Rusz J.

IT-16-P-1962

Slice-by-slice simulations of absorption potential for high-angular resolution electron channeled X-ray spectroscopy

Presenting author: **Ohtsuka M.**

Authors: Ohtsuka M., Muto S.

IT-16-P-2001

Modified Random Walk Algorithm for Monte Carlo Modeling of EBIC and Cathodoluminescence

Presenting author: **Priesol J.**

Authors: Priesol J., Šatka A.

IT-16-P-2085

Calculations of elastic and inelastic scattering processes of relativistic electrons in oriented crystals

Presenting author: **Hinderks D.**

Authors: Hinderks D., Kohl H.

IT-16-P-2124

The dependence of SNR, contrast and resolution on electron dose and sampling

Presenting author: **Lee Z.**

Authors: Lee Z., Rose H., Lehtinen O., Biskupek J., Kaiser U.

IT-16-P-2225

Inelastic scattering of electron vortex beams: mechanism and optimal conditions for EMCD measurements

Presenting author: **Rusz J.**

Authors: Rusz J., Bhowmick S.

IT-16-P-2289

An accurate parameterization for the scattering factors for neutral atoms that obey all physical constraints

Presenting author: **Lobato I.**

Authors: Lobato I., Van Dyck D.

IT-16-P-2503

First principle study of EELS spectra in amorphous silicon and lithiated silicon alloys

Presenting author: **Moreau P.**

Authors: Donval G., Moreau P., Danet J., Bayle-Guillemaud P., Jouanneau-Si Larbi S., Boucher F.

IT-16-P-2511

Recent improvements in the STEM-CELL software

Presenting author: **Grillo V.**

Authors: Grillo V., Rotunno E., Campanini M., Spadaro M. C., D'addato S.,

IT-16-P-2612

A Perturbation Theory Study of Electron Vortices in Electromagnetic Fields: the Case of Infinitely Long Line Charge and Magnetic Dipole

Presenting author: **Wang P.**

Authors: Xie L., Wang P., Pan Q. X.

IT-16-P-2621

Realistic amorphous carbon model for high resolution microscopy and electron diffraction simulations

Presenting author: **Ricolleau C.**

Authors: RICOLLEAU C., LE BOUAR Y., AMARA H., LANDON-CARDINAL O., ALLOYEAY D.

IT-16-P-2686

Remove the CCD influence from high-resolution electron microscopy images

Presenting author: **Lin F.**

Authors: Lin F., Jin C., Yang Y.

IT-16-P-2731

Methods for Scanning Transmission Electron Microscopy High Angle Annular Dark Field based for three dimensional analysis of the local composition in solid alloys

Presenting author: **Grillo V.**

Authors: Rotunno E., Grillo V., Markurt T., Remmele T., Albrecht M.

IT-16-P-2748

The forward dynamical electron scattering (FDES) software; a graphics-processing-unit accelerated multislice algorithm

Presenting author: **Van Den Broek W.**

Authors: Van den Broek W., Koch C. T.

IT-16-P-2768

Influence of the delocalization of inner-shell excitations on atomic-resolution elemental maps

Presenting author: **Park M.**

Authors: Park M., Majert S., Kohl H.

IT-16-P-2950

The partial spatial coherence function and the distribution of scattered electrons

Presenting author: **Nguyen D. T.**

Authors: Nguyen D. T., Findlay S. D., Etheridge J.,

IT-16-P-2955

Removing the effects of elastic and thermal scattering from spectrum images in scanning transmission electron microscopy

Presenting author: **Lugg N. R.**

Authors: Lugg N. R., Neish M. J., Haruta M., Kothleitner G., Grogger W., Hofer F., Kimoto K., Mizoguchi T., Findlay S. D., Allen L. J.

IT-16-P-3028

Phase mapping at the interface retrieved by FFT based transport of intensity equation

Presenting author: **Zhang X.**

Authors: Zhang X., Oshima Y.,

IT-16-P-3032

Computer vision in the service of Crystallography: Automated analysis of atomic-resolution images

Presenting author: **Klinger M.**

Authors: Klinger M.

IT-16-P-3168

Simultaneous thickness and orientation mapping by dark-field transmission electron microscopy

Presenting author: **Tyutyunnikov D.**

Authors: Tyutyunnikov D., Koch C. T.

IT-16-P-3170

Structure factor refinement from electron diffraction for structures with arbitrarily large unit cells

Presenting author: **Feng W.**

Authors: Feng W., Kazzazi A., Koch C. T.

IT-16-P-3277

BlochSim: A new, free to use, open source Bloch Wave Simulation program

Presenting author: **Evans K. L.**

Authors: Evans K. L., Roemer R. A., Beanland R.

IT-16-P-3287

Electron vortex beam diffraction via multislice solutions of the Pauli equation

Presenting author: **Edström A.**

Authors: Edström A., Rusz J.

IT-16-P-3331

Atomically Resolved Low-Loss Imaging of Graphene in the Aberration-Corrected STEM

Presenting author: **Oxley M. P.**

Authors: Oxley M. P., Kapatzenakis M. D., Prange M. P., Zhou W., Idrobo J. C., Pennycook S. J., Pantelides S. T.

IT-16-P-3434

Super-Resolution applied to Magnetite boundaries images

Presenting author: **Bárcena G.**

Authors: Bárcena G., Guerrero M., Guerrero E., Kepaptsoglou D., Gilks D., Lari L., Lazarov V. K., Galindo P. L.

IT-16-P-3481

Chiral-dependent electron vortex energy loss spectroscopy

Presenting author: **Yuan J.**

Authors: Yuan J., Lloyds S., Babiker M.