



<http://matmeca.cnrs.fr/>

Annonce de séminaire pour la plateforme
Caractérisation micro-mécanique in-situ

Jan Neggers

jan.neggers@ens-paris-saclay.fr

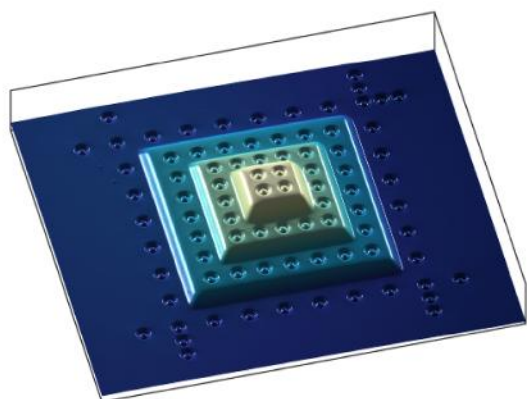
***Combined Image Correlation and Surface Reconstruction
for In-situ Scanning Electron Microscopy***

Jeudi 8 mars 2018 à 11h30

Bâtiment Francis Bouygues – salle e.068

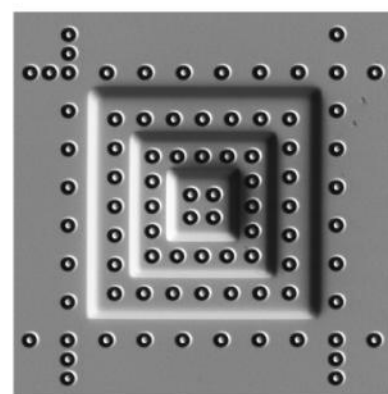
CentraleSupélec - 8-10 rue Joliot-Curie - 91 190 Gif-sur-Yvette

Scanning Electron Microscopy (SEM) images often contain topological contrast. This contrast has such a natural appearance that it tends to evoke a 3D reconstruction in our brains. Therefore, it is no surprise that, already early on in the SEM history, researchers have been reconstruction sample surface topography using "Shape from Shading" methods. Within the presented work, the reconstruction algorithms for 4-quadrant Back Scatter Electron (BSE) images have been improved by generalizing the concept to 3 or more detectors in any orientation. Moreover, the reconstruction algorithm is tightly interwoven with a Quasi-3D Finite Element (FE) based Digital Image Correlation (DIC) method. Performing DIC in conjunction with the reconstruction allows the in-plane registration to be performed on the rich multi-detector data, while using the reconstructed data only for the out-of-plane registration.



Shape

from



Shading