



## Seminar/Talk

# GE OMX SR: Making sense of (TIRF) SIM and demystifying deconvolution.

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Host: Martin Loose

Structured Illumination Microscopy (SIM) is a fast and live cell compatible method to beat the performance of widefield and confocal microscopes in contrast, resolution (120 nm) and even speed over a large field of view, using the samples you already have. The method is simple in principle, but the details really matter: Accuracy, Reproducibility, Sensitivity, High Speed, Optics Alignment and Selection, and of course the reconstruction algorithm implementation must all be finely tuned (but not by the user!) Combination of total internal reflection microscopy and SIM (TIRF-SIM) allows even more resolution and speed, and produces stunning results of objects moving close the coverslip at many frames per second. The OMX SR provides a user friendly, compact, super-fast, robust, stable and finely tunable fluorescence microscopy platform for 3D-SIM, as well as widefield restoration (deconvolution) microscopy, and also TIRF and TIRF-SIM. The hardware and software design, implementation, and ease of use enable to user to concentrate on the biology and getting world class microscopy results, whilst the machine takes care of the details. This seminar will introduce you to 3D-SIM and TIRF-SIM, as well as why image restoration (deconvolution) is a must using music as an analogy. Also, the unique OMX hardware implementation, system optimisation, ease of use, and tips and tricks will be discussed.

**Tuesday, November 28, 2017 09:00am - 10:15am**

Mondi Seminar Room 3, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.