

Pour continuer à stimuler les interactions au sein de la communauté scientifique grenobloise travaillant sur la thématique "Nano and Micro-Environments for Cell Biology", nous avons le plaisir de vous convier au séminaire donné (en anglais) par :

## Dr Michael SHEETZ

Director of the Mechanobiology Institute of Singapore

&

Professor of the Department of Biological Sciences at Columbia University



### “Cellular Mechanosensing in Adhesions by stretching again and again”

**Vendredi 29 avril à 14h**  
**dans l'amphithéâtre Doyen Gosse,**  
**RDC du Bâtiment C - Grenoble INP**  
**46, avenue Félix Viallet, 38000 Grenoble**

#### Dr Sheetz's Research Interests:

The morphology of cells, organs and whole organisms is determined by the generation of forces on the immediate environment, which is either extracellular matrix or adjacent cells. We are currently engaged in studies to understand the detailed molecular mechanisms involved in a variety of phenomena from fertilisation to brain function. Further, we are developing several new tools and protocols for measuring cell forces at the molecular level, which are revealing many new aspects of how cells can both generate and respond to external forces. We have an effort underway to define quantitatively the steps involved in cell adhesion to and spreading on a matrix-coated surface. Using a variety of cell lines that are missing proteins in various motility pathways, we are determining the quantitative changes in the spreading process. This will enable us to generate a working model of the process of spreading that is consistent with previous studies as well as our findings.

#### Contact :

Ce séminaire est organisé avec l'aide de Laurent BLANCHOIN (iRTSV, CEA): [laurent.blanchoin@cea.fr](mailto:laurent.blanchoin@cea.fr), cependant pour toute question d'ordre « pratique », merci de vous adresser à Stéphanie MONFRONT : [stephanie.monfront@fondation-nanosciences.fr](mailto:stephanie.monfront@fondation-nanosciences.fr) // 04 56 52 96 03.