

MC19: Physics of Living Systems at molecular and cellular scales

Organisatrices : C. Leduc, K. Sengupta & E. Helfer

Lundi 22 août – 14h15- 17h45

14:15 - 14:45 From the measure of cell/substrate mechanical interaction to understanding of cell activity for motility

INVITÉES

A. Nicolas and H. Delanoë-Ayari

Laboratoire des Technologies de la Microélectronique (LTM), CEA, Grenoble, France.

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MC19-1

Institut Lumière Matière (ILM), Lyon, France. helene.delanoë-ayari@univ-lyon1.fr

14:45 - 15:00 Physical Virology: mechanical properties of viral capsids and genome uncoating probed by AFM

MC19-2

C. Faivre-Moskalenko, Y. Carrasco Salas, K. Gerard, L. Menou, L. Lecoq, A. Salvetti, F. Montel and M. Castelnovo

École Normale Supérieure de Lyon, Lyon, France. cendrine.moskalenko@ens-lyon.fr

15:00 - 15:15 Generic Stress Rectification in Nonlinear Elastic Media

MC19-3

F. Benoist, G. Saggiorato and M. Lenz

Laboratoire de Physique Théorique et Modèles Statistiques (LPTMS), Orsay, France.

15:15 - 15:30 Size-dependent internalization efficiency of macrophages from adsorbed nanoparticle-based monolayers

MC19-4

T. Petithory, L. Pieuchot, L. Josien, A. Ponche, K. Anselme and **L. Vonna**

Institut de Science des Matériaux de Mulhouse, Mulhouse, France. laurent.vonna@uha.fr

15:30 - 15:45 The physics of cell cortex studied with a magnetic pincher

MC19-5

V. Laplaud, J. Vermeil, A. Jawahar, M. Coppey, M. Piel, J. Heuvingh and **O. du Roure**

Physique et Mécanique des Milieux Hétérogènes, ESPCI Paris, PSL University, CNRS, Univ Paris Cité, Sorbonne Université, Paris France

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15h45-16h15 Coffee break

16:15 - 16:45 What can we learn from the stochastic trajectories of biological systems?

INVITÉ

P. Ronceray

Centre Interdisciplinaire de Nanoscience de Marseille (CINaM) & Turing Centre for Living Systems, Marseille, France. pierre.ronceray@univ-amu.fr

MC19-6

16:45 - 17:00

Experimental approaches to molecular modeling of the vascular wall glycocalyx

MC19-7

O. Kirichuk, D. Débarre, L. Bureau and R. P. Richter

Laboratoire Interdisciplinaire de Physique (LIPhy), Grenoble, France. oksana.kirichuk@univ-grenoble-alpes.fr

17:00 - 17:15

The role of tissue flows for symmetry breaking in embryonic organoids

MC19-8

S. Gsell, S. Tlili, M. Merkel and P.-F. Lenne

Centre de Physique Théorique (CPT) & Institut de Biologie du Développement de Marseille (IBDM), Marseille, France & Turing Centre for Living Systems. simon.gsell@univ-amu.fr

17:15 - 17:30

Quantitative FRET and stoichiometry measurements in living cells with QuantI-FRET

MC19-9

J. Leblanc, A.H. Lombard, A. Coullomb, C. Qian, D.C. Lamb and **A. Dupont**

Laboratoire Interdisciplinaire de Physique (LIPhy), Grenoble, France. aurelie.dupont@univ-grenoble-alpes.fr

17:30 - 17:45

Catch and Thread: experimental study of a nanoscale translocation ratchet

MC19-10

B. Molcrette and F. Montel

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Posters

MC17-11

Red blood cell dynamics in narrow constrictions biomimicking the splenic slits

E. Helfer, A. Moreau, H. Lu, A. Charrier, Z. Peng and A. Viallat

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MC17-12

Vimentin intermediate filament assembly is a reversible process

Q. D. Tran, V. Sorichetti, G. Pehau-Arnaudet, M. Lenz and **C. Leduc**
Institut Jacques Monod (IJM), Paris, France. cecile.leduc@ijm.fr

MC17-13

Analyse morpho-constitutionnelle des calculs urinaires par spectrophoto-métrie infrarouge (SPIR)

T. Djemil
Faculté de Médecine, Université Badji Mokhtar, Annaba, Algérie. djemil@ticedu.net

MC17-14

Adhesion/mechanics of cells and membranes

K. Sengupta
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