

MC6: Collective movements across scales

Organisatrices : C. Douarche, C. Appert-Rolland & A. Dupont

Mardi 23 août – 15h00- 18h30

15:00 - 15:30	Collective effects in bacteria suspensions
INVITÉ	Carine Douarche <i>Laboratoire FAST, Univ. Paris Saclay</i>
MC6-1	
15:30 - 15:45	Information waves, fluctuations and criticality in the initiation of collective motion
MC6-2	P. Rahmani and F. Peruani <i>CY Cergy Paris Université, CNRS UMR 8089, LPTM, Cergy-Pontoise</i> <i>rahmani.prs@gmail.com</i>
15:45 - 16:00	Collective movements in complex environments: A Fish School evacuation through a bottleneck
MC6-3	R. Larrieu , P. Peyla and A. Dupont <i>Univ. Grenoble Alpes, CNRS, LIPhy, Grenoble</i> <i>renaud.larrieu@univ-grenoble-alpes.fr</i>
16:00 - 16:15	Vision based transition in collective dynamics of a fish school under illuminance variations
MC6-4	B. Lafoux , R. Godoy-Diana and B. Thiria <i>PMMH, CNRS, ESPCI Paris-PSL, Sorbonne Univ., Univ. Paris-Cité</i> <i>baptiste.lafoux@espci.fr</i>
16:15 - 16:30	Light-induced phase separation and pattern formation by swimming micro-algae
MC6-5	I. Eisenmann , A. Lhomme, N. Desprat and R. Jeanneret <i>LPENS, Paris.</i>
16h30-17h00 Coffee break	

17:00 - **Crowd simulation: scales, algorithms and data**

17:30
INVITÉ

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MC6-6

17:30 -
17:45 **Modélisation de l'anticipation des collisions et des contacts dans la dynamique des foules piétonnes**

MC6-7

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17:45 -
18:00

Repulsive torques alone trigger crystallization of constant speed active particles

MC6-8

M. Le Blay and A. Morin
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18:00 -
18:15

Fluctuation-induced first order transition to collective motion

MC6-9

D. Martin, H Chaté, C. Nardini, A. Solon, J. Tailleur and F. Van Wijland
E. Fermi Inst., Univ. Chicago ; Univ. Paris, MSC, Paris ; Physique de l'État condensé, CEA, Paris Saclay ; Sorbonne Univ. CNRS, LPTMC, Paris.
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18:15 –
18:30

Rotation Control, Interlocking and Self-positioning of Active Cogwheels

MC6-10

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Posters

MC6-11

Micromachines made of active colloids

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MC6-12

Stop and go waves of pedestrians based on a behavioral model

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MC6-13 O2 regulated microphase separation of living cells

J.P. Rieu, **A. Carrère**, O. Cochet-Escartin, C. Anjard and F. Detcheverry
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MC6-14 Predicting the stationary density profile of a population of migrating cells

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MC6-15 Noise-induced breakdown in single-file motion

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MC6-16 Disordered collective motion in dense assemblies of persistent particles

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MC6-17 Active systems exhibit multiple phase separation classes: from standard phase separation to condensation

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MC6-18 Active transport in confinement

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MC6-19 Hypoxia triggers collective aerotactic spreading of eukaryotic cells

J.-P. Rieu, N. Ghazi, A. Chauviat, S. Fabre, O. Cochet-Escartin, M. Demircigil, S. Hirose, V. Calvez, K. Funamoto and C. Anjard
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MC6-20

Bacterial motility and early colony formation on a stiffness gradient.

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