





YANN-EDWIN KETA

Doctoral student


 November 24th, 1995


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 yketa.xyz


 github.com/yketa

Education

2016-2018
MSc. in Physics *High honours*
École normale supérieure de Lyon 
Specialisation in computational physics, soft matter, and statistical physics.

2015-2016
BSc. in Physics *High honours*
École normale supérieure de Lyon 

2013-2015
Classes préparatoires aux grandes écoles (PCSI/PC*)
Lycée Lakanal, Sceaux 
Ranked 59th in the École normale supérieure de Lyon entrance exam.



2018-2019 (Gap year)
MA in Social sciences *1st year*
École normale supérieure de Lyon 

Skills

Programming

- * Proficient in Python, bash, C/C++, SageMath, Mathematica.
- * Working knowledge of collaborative version control tool Git.
- * Molecular dynamics, CPU and GPU parallelisation, biased path ensemble algorithm.

Languages


 French – Native speaker
 English – Fluent

Interests



- * Extreme music
- * Free software culture
- * Open knowledge initiatives
- * Environment

Research


Sep 2020 **PhD: "Collective dynamics in model active matter"**

- Current Laboratoire Charles Coulomb, UMR 5221 CNRS,
Université de Montpellier 
Simons Collaboration on *Cracking the Glass Problem*


Supervisors: Ludovic Berthier (Montpellier, Cambridge),
Robert L. Jack (Cambridge)

Oct 2019 **"Active work in systems of self-propelled particles"**
- July 2020 Department of Applied Mathematics and Theoretical Physics,
University of Cambridge 
Laboratoire Matière et Systèmes Complexes, UMR 7057 CNRS,
Université de Paris 


Supervisors: Robert L. Jack, Michael E. Cates (Cambridge),
Frédéric van Wijland (Paris)

Jan 2018 **"Simple model of active particles"**
- Jul 2018 Stewart Blusson Quantum Matter Institute,
University of British Columbia 

Supervisor: Jörg Rottler


May 2017 **"Numerical analysis of jamming criticality for spheroidal particles"**
- Jul 2017 Institutionen för fysik, Umeå universitet 


Supervisor: Peter Olsson


Jun 2016 **"Leidenfrost drop impacts on surfaces with micrometric defects"**
- Jul 2016 Institut Lumière Matière, UMR 5306 CNRS,
Université Claude Bernard Lyon 1 


Supervisors: Quentin Ehlinger, Christophe Ybert


Publications

YEK, R. Mandal, P. Sollich, R. L. Jack, and L. Berthier, "Intermittent relaxation and avalanches in extremely persistent active matter", *arXiv* (2022).  arXiv:2212.09836

YEK, R. L. Jack, and L. Berthier, "Disordered collective motion in dense assemblies of persistent particles", *Physical Review Letters* **129**, 048002 (2022) [DOI:10.1103/PhysRevLett.129.048002].  arXiv:2201.04902

YEK, É. Fodor, F. van Wijland, M. E. Cates, and R. L. Jack, "Collective motion in large deviations of active particles", *Physical Review E* **103**, 022603 (2021) [DOI:10.1103/PhysRevE.103.022603].  arXiv:2009.07112

YEK and P. Olsson, "Translational and rotational velocities in shear-driven jamming of ellipsoidal particles", *Physical Review E* **102**, 052905 (2020) [DOI:10.1103/PhysRevE.102.052905].  arXiv:2006.05305

T. Marschall, YEK, P. Olsson, and S. Teitel, "Orientational Ordering in Athermally Sheared, Aspherical, Frictionless Particles", *Physical Review Letters* **122**, 188002 (2019) [DOI:10.1103/PhysRevLett.122.188002].  arXiv:1806.01739

YEK and J. Rottler, "Cooperative motion and shear strain correlations in dense 2D systems of self-propelled soft disks", *EPL* **125**, 58004 (2019) [DOI:10.1209/0295-5075/125/58004].

Teaching

2022 **Physics for life sciences, and Python for sciences (undergraduates)**
Université de Montpellier 

2018/19 **Oral interrogator (Physics, Chemistry, Mathematics)**








2016/17 Lycée du Parc, Institution des Chartreux, Lycée La Martinière Diderot (Lyon) 



SIMONS
FOUNDATION



Conferences

- 12/22 **Active days EUTOPIA, Challenges in Active Matter**
CY Cergy Paris University 
Contributed talk.
- 11/22 **GDR IDE “Interaction, Disorder, Elasticity”**
Université Grenoble Alpes 
Contributed talk.
- 06/22 **Active & Intelligent Living Matter Conference**
Erice, Sicily 
Contributed poster.
- 06/22 **Beg Rohu Summer School 2022**
Quiberon 
“Out of Equilibrium Dynamics”. Summer school. Poster.
- 02/22 **Edwards Centre for Soft Matter Mini-Conference**
University of Cambridge 
Contributed talk.
- 10/21 **UCA Fall program on Complex Systems 2021**
Université de Nice 
“Mobility, self-organization and swimming strategies”. Summer school.
- 03/21 **APS March Meeting**
Online 
Contributed talk.

Refereeing

- 2022 **Nature Communications**
1 review.
- 2022 **Scientific Reports**
1 review.
- 2022 **Physical Review E**
1 review.
- 2022 **SciPost**
1 review.