

# Workshop 2017



*Nonequilibrium Collective Dynamics in  
Condensed Matter and Biological Systems*

Hotel Döllnsee-Schorfheide, Templin (Groß Dölln), Brandenburg  
September 27 – 29, 2017

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## Talks

Wednesday, September 27

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Lunch

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- 13:55 – 14:00      HOLGER STARK  
Welcome Address
- 14:00 – 14:30      ANKE ZIMMERMANN  
Two dimensional spectroscopy of Coulomb coupled colloidal quantum dots
- 14:30 – 15:00      MANUEL KRAFT  
Time-delayed multi-photon scattering in waveguide QED
- 15:00 – 15:30      CHRISTOPHER WÄCHTLER  
Electron shuttle as a model system exhibiting self-oscillations
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Coffee break

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- 16:00 – 16:30      SEBASTIAN RESTREPO  
Reaction Coordinate Mapping of Driven Systems
- 16:30 – 17:00      CHRISTOPH REDLICH  
High beta QD microlasers subject to time-delayed optical feedback
- 17:00 – 17:20      SINA BÖHLING  
Topology and Quantum Transport in the SSH Chain
- 17:20 – 17:40      JULIAN STÜRMER  
Chemotaxis in a binary mixture of active and passive colloids

## Thursday, September 28

- 9:00 – 9:30            SHAHAJHAN SORATHIYA  
Collective dynamics of squirmers in Poiseuille flow
- 9:30 – 10:00         HENNING REINKEN  
Influence of orienting external fields on the dynamics of mesoscale turbulence
- 10:00 – 10:30        REINIER VAN BUEL  
Elastic turbulence in a two-dimensional Taylor-Couette geometry at low Reynolds numbers

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Coffee break

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- 11:00 – 12:00        CHRISTIAN SCHOLZ  
The Basics of 3D printing I
- 12:00 – 12:30        SETAREH DOLATI  
Density effect in force generation and protrusion mechanism of motile cells

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Lunch

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- 14:00 – 14:30        PAVEL BURAN  
Under and overdrive-pacing of stable spirals in cardiac tissue
- 14:30 – 15:00        ENRICO FENGLER  
Synchronization and autonomous learning in multiplex networks

## Friday, September 29

- 9:00 – 9:30            SOPHIA HELMRICH  
Polarization-resolved photoluminescence experiment on mono- and bilayer  
MoTe<sub>2</sub>
- 9:30 – 10:00         ZAHRA ALIREZAEI  
How growth conditions affect bacterial chemotaxis responses
- 10:00 – 10:30        MAXIMILIAN SEYRICH  
Statistical Inference of Bacterial Chemotaxis Strategies

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Coffee break

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- 11:00 – 12:00        CHRISTIAN SCHOLZ  
The Basics of 3D printing II
- 12:00 – 12:30        JAN-TIMM KUHR  
last year in GRK 1558, opportunities in GRK 1558

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Lunch

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## Posters

ZAHRA ALIREZAEI	How growth conditions affect bacterial chemotaxis responses
PAVEL BURAN	Wavecontrol by cooperative excitation of cardiac tissue
SETAREH DOLATI	How lamellipodial actin network controls its own viscoelastic properties in motile cells
ENRICO FENGLER	Synchronization and autonomous learning in multiplex networks
SOPHIA HELMRICH	Atomic Force Microscopy of Few-Layer Transition Metal dichalcogenide $\text{MoTe}_2$
MANUEL KRAFT	Time-delayed feedback control in waveguide QED systems
HENRY MITTENZWEY	Optical pump terahertz probe spectroscopy in graphene
CHRISTOPH REDLICH	High beta QD microlasers subject to time-delayed optical feedback
HENNING REINKEN	Influence of orienting external fields on the dynamics of mesoscale turbulence
ALEXANDER SCHREIDER	Atomic Force Microscopy of Few-Layer Transition Metal dichalcogenide $\text{MoTe}_2$
MAXIMILIAN SEYRICH	Statistical Inference of Bacterial Chemotaxis Strategies
SHAHAJHAN SORATHIYA	Collective dynamics of squirmers in Poiseuille flow

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Workshop homepage:

[www.itp.tu-berlin.de/grk1558/events/workshops/workshop\\_2017](http://www.itp.tu-berlin.de/grk1558/events/workshops/workshop_2017)

Conference booklet by

Jan-Timm Kuhr

Number of participants: 29

Number of talks: 20

Number of posters: 11



	chair	Wednesday, 27.09.2017	chair	Thursday, 28.09.2017	chair	Friday, 29.09.2017
Breakfast		9:30 bus departure at Hardenbergplatz		8:00 – 9:00		8:00 – 9:00 Breakfast and Checkout
9:00 – 9:30			Alirezaei	Shahajhan Sorathiya (B.2, Stark)	Dolati	Sophia Helmrich (A.5, Woggon)
9:30 – 10:00				Henning Reinken (B.3, Klapp)		Zahra Alirezaei (C.1, Beta)
10:00 – 10:30				Reinier van Buel (PhD student, Stark)		Maximilian Seyrich (C.2, Stark)
Coffee break				10:30 – 11:00		10:30 – 11:00
11:00 – 11:30			Seyrich	Tutorial: The Basics of 3D printing I (Christian Scholz)		Tutorial: The Basics of 3D printing II (Christian Scholz)
11:30 – 12:00				Setareh Dolati (C.5, Falcke)		Jan-Timm Kuhr
12:00 – 12:30						
Lunch		12:00 – 13:55 Check-In and Lunch 13.55 Welcome address (Holger Stark)		12:30 – 14:00 Lunch		12:30 – 12:35 Closing remarks 12:35 – 14:00 Lunch
14:00 – 14:30	Restrepo	Anke Zimmermann (A.4, Knorr)	Seyrich	Pavel Buran (C.4, Bär)		14.30 bus departure
14:30 – 15:00		Manuel Kraft (A.4, Knorr)		Enrico Fengler (C.3, Engel)		
15:00 – 15:30		Christopher Wächtler (PhD student, Schaller)				
Coffee break		15:30 – 16:00		15:30 – 18:00 Geocaching		
16:00 – 16:30	Zimmermann	Sebastian Restrepo (A.2, Schaller)		18:30 departure by bus to conference dinner at Gut Sarnow return by bus		
16:30 – 17:00		Christoph Redlich (A.1, Schöll)				
17:00 – 17:20		Sina Böhling (research student, Schaller)				
17:20 – 17:40		Julian Stürmer (research student, Stark)				
Dinner		18:00 – 19:30				
		19:30 meeting of project leaders				

Timetable GRK 1558 Workshop 2017