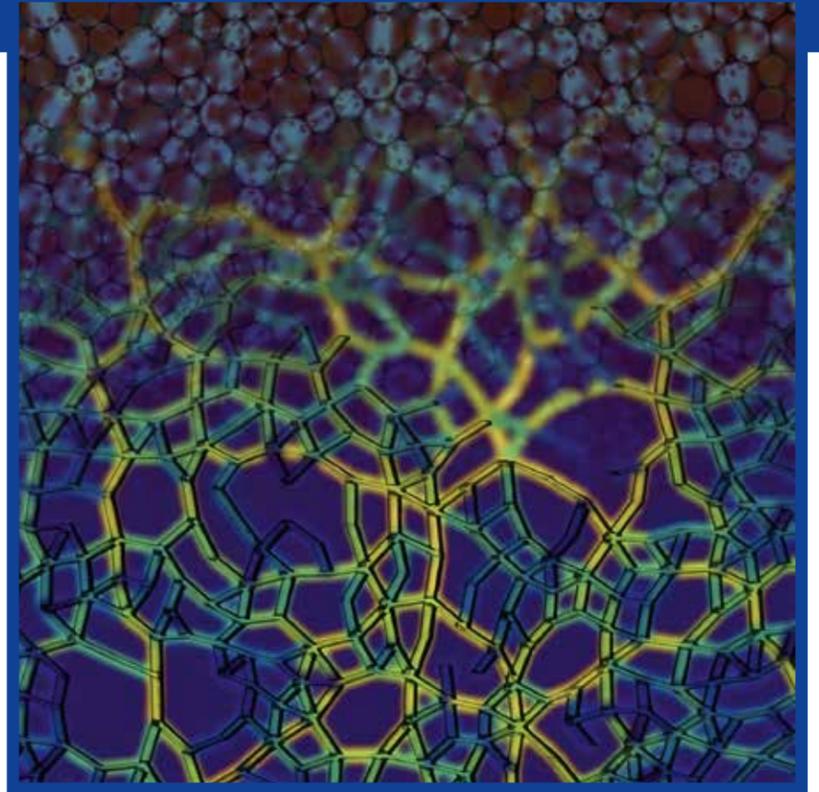




# Granular and Particulate Networks

## International Focus Workshop 8 - 10 July 2019

Granular materials have often been investigated using particulate or continuum models, each of which tends to be implicitly agnostic to multiscale organization. Recently, tools from network science have emerged as powerful approaches for probing and characterizing heterogeneous architectures in complex systems, and a diverse set of methods have yielded fascinating insights into granular materials.



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### Key questions

- What are the key characteristics of the spatial and temporal patterns of force transmission in granular and other particulate materials?
- What are the most appropriate tools from network analysis (and other areas of mathematics), either existing or to be developed, to describe the dynamics of granular materials?
- How do we predict which parts of a granular system will fail using these tools, and how do we design and engineer materials with desired properties?

### Invited speakers

Carl Dettmann (UK)  
 Wiebke Drenckhan (FR)  
 Michael Engel (DE)  
 Silke Henkes (UK)  
 Eleni Katifori (US)  
 Abigail Klopper (UK)  
 Jonathan Kollmer (DE)  
 Erin Koos (BE)  
 Jürgen Kurths (DE)  
 Andrea Liu (US)  
 Xiaoming Mao (US)  
 Ling Miao (US)  
 Konstantin Mischaikow (US)  
 Katie Newhall (US)  
 Giovanni Petri (IT)  
 Srikanth Sastry (IN)  
 Matthias Schröter (DE)  
 Ashley Smart (US)  
 Marc Timme (DE)  
 Antoinette Tordesillas (AU)

### Scientific coordinators

Danielle S. Bassett  
 Philadelphia, USA  
 Karen E. Daniels  
 Raleigh, USA  
 Mason A. Porter  
 Los Angeles, USA

**Organisation**  
 Katrin Lantsch  
 MPIPKS Dresden

Applications received before 31 March 2019 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international workshop is 140 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

#### For further information please contact:

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