



*We cordially invite to the*

## Seminar of GRK 1558

Wednesday, February 1<sup>st</sup> 2017 · 16:15h · EW 731 · TU Berlin

### Sindre W. Haugland

TU München

#### **“On the general coexistence of disparate dynamics — a broader look at chimera states and beyond”**

Loosely defined, a chimera state is the simultaneous coexistence of synchronous and asynchronous oscillation in separate parts of a network of identical coupled oscillators. Motivated by the increasing number and variety of reported chimera states, this talk will begin with the introduction of a data-driven classification scheme. Based on the spatial and temporal coherence of oscillators, this classification scheme is applicable to any kind of chimera. We then move on to the subject of their origins, which we study by means of a completely self-organized chimera state observed in one of our model systems. This chimera state is found to emerge from the synchronized state in a complex series of bifurcations. Finally, following the discovery of several related states, we conclude with a discussion of whether chimera states might better be viewed as just one particularly illustrious member of a broader family of dynamical coexistence patterns.