

October the 24th, 2022, Namur, Belgium / Dep. of Mathematics, room S06

# Dynamical processes on networks (II)

13h00-13h45 Yuzuru Kato & **Hiroya Nakao**, Tokyo Institute of Technology (Japan)

*Turing instability in quantum activator–inhibitor systems*

14h00-14h15 **Timoteo Carletti, Alexandre Mauroy & Hiroya Nakao**

*5' introduction to our research teams*

14h15-15h45 **6 talks**

15h45-16h15 **coffee break**

16h15-17h45 **6 talks**

# Dynamical processes on networks (II)

## 14h15-15h45

- Jean-François de Kemmeter (UNamur) "social adoption on signed simplicial complexes"
- Jinjie Zhu (Tokyo Tech) "Synchronization dynamics for SISR oscillators with all-to-all coupling"
- Cédric Simal (UNamur) "Effects of local interactions on epidemic spreading in networks of structured populations"
- Tomokatsu Onaga (Tohoku U) "Dynamics of social diffusion: A message-passing approach"
- Christian Mugisho-Zagabe (UNamur) Global stability of a flow-invariant set for nonlinear systems : Construction of a Lyapunov function via Koopman operator theory
- Renato Vizuite (UNamur and UCLouvain) "The Laplacian spectrum of large graphs sampled from graphons"

## 16h15-17h45

- Shigefumi Hata (Kagoshima U) "Relationship between degree and weighted degree of hypergraph"
- Martin Moriamé (UNamur) "Selection of controlled nodes to reduce synchronization in Kuramoto oscillators networks"
- Petar Mircheski (Tokyo Tech) "Phase-amplitude reduction of collective oscillating networks"
- Riccardo Muolo (UNamur)(Teams) "The impact of directed high-order interactions on synchronization"
- Ryota Kobayashi (Univ. Tokyo) "Estimating neural connectivity from multiple spike trains"
- Anthony Hastir (UNamur) "Infinite-dimensional systems and control theory"