MAX PLANCK GESELLSCHAFT

mpipks

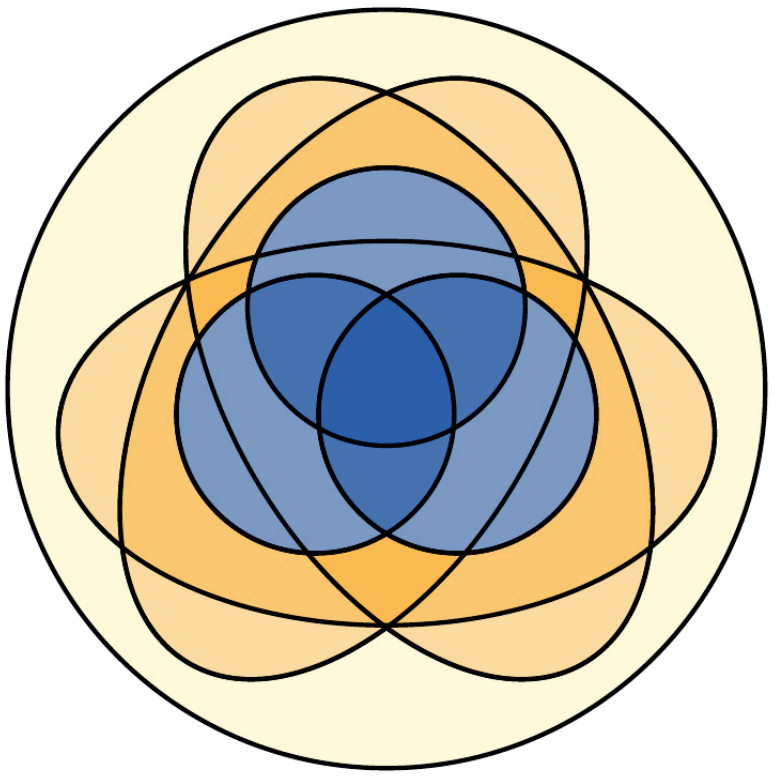
Decomposing Multivariate Information in Complex Systems

Max Planck Institute for the Physics of Complex Systems

International Workshop
05 - 09 June 2023

Information decomposition seeks to partition the total information provided by a set of sources into its unique, redundant and synergistic components, a task that is not addressed by Shannon's information theory.

This workshop aims to bring together the entire community of researchers working on this problem into a single venue for the first time.



Topics:

- Historical background
- Existing progress on information decomposition
- Novel measures and approaches
- Lattices and algebraic structures
- Continued development of existing approaches
- Quantifying computation, emergence and causality in physical systems
- Applications in neuroscience
- Information decomposition for robotics and AI
- Biological and biology-inspired applications

Invited speakers:

Nihat Ay (DE)
Ann Babtie (UK)
Randall Beer (US)
Jürgen Jost (DE)
Artemy Kolchinsky (JP)
Joseph Lizier (AU)
Daniele Marinazzo (BE)
Eckehard Olbrich (DE)
Stefano Panzeri (DE)
Daniel Polani (UK)
Viola Priesemann (DE)
Fernando Rosas (UK)
Elad Schneidman (IL)
Greg Ver Steeg (US)
Raul Vicente (EE)
Patricia Wollstadt (DE)

Scientific coordinators:

Conor Finn
Leipzig, DE

Ari Pakman
Beer Sheva, IL

Michael Wibral
Göttingen, DE

Organisation:

Claudia Domaschke
MPIPKS Dresden

Applications received before 31st March 2023 are considered preferentially.

We aim for an in-person workshop with all participants on-site.

Applications are welcome and should be made by using the application form on the workshop web page (see contact details on the right). 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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We also offer individual fellowships (phd, postdoc, sabbatical). Applications are accepted continuously. For details, please check www.pks.mpg.de/visitors