

# STATISTICAL PHYSICS SEMINAR

December 12th, 2018.

Wednesday, 11.00

ELTE TTK Northern Building 2.54

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## **Network-theory approach to geophysical fluid transport**

Transport of water, air, heat, salt or pollutants are key processes in climatic dynamics or for marine ecosystems health. In this talk I will overview a set of techniques, which build on the so-called 'set-oriented methods' to describe fluid transport, leading to the construction of Lagrangian Flow Networks. In these networks, fluid transport is represented by directed links with strength quantifying the amount of flow among spatial locations. Powerful tools from network theory can then be applied to assess fluid mixing and stretching, compute dominant transport pathways, or to identify coherent structures in the flow. Applications to the surface circulation in the Mediterranean, with ecological implications, and to an atmospheric blocking event will be presented.

1117. Budapest, Pázmány Péter sétány 1/A (Északi tömb)

**Room 2.54**

<http://glu.elte.hu/~statfiz/index.html>