Topology and dynamics of real-world networks

**Doctoral School:** Doctoral School of Computer Science  
**Institute:** University of Szeged  
**Supervisor:** Péter Csermely  

**Topic Description:**  
In the research work the PhD student will apply and develop further the network analysis methods developed by the LINK-Group ([http://www.modules.linkgroup.hu](http://www.modules.linkgroup.hu) [1], [http://www.networgame.linkgroup.hu](http://www.networgame.linkgroup.hu) [2] és [http://turbine.hu](http://turbine.hu) [3], [http://linkgroup.hu/networkrepresentation.php](http://linkgroup.hu/networkrepresentation.php) [4]) assessing real-world networks. The research topic includes the network analysis of network modules, bridging nodes, cores, as well as the assessment of the attractor structure of the state space of real-world complex systems and the intervention points, which are needed to be excited or inhibited to shift the complex system from one given state to another.

**Admissible number of students:** 1  
**Deadline for applications:** 2016-09-30

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