COURSE DETAIL

THEORY OF COMPLEX NETWORKS
Country United Kingdom - England
Host Institution King's College London
Program(s) King's College London
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 117
UCEAP Course Suffix
UCEAP Official Title THEORY OF COMPLEX NETWORKS
UCEAP Transcript Title COMPLEX NETWORKS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The course covers the following: Microscopic properties of networks: adjacency matrix, vertex degree, clustering coefficient, measures of node centrality and node similarity. Macroscopic properties of networks: degree distributions, graph modularity, and assortativity. Processes on networks: voter model, diffusion process, random walk on a graph, PageRank, and spectral distribution. Random graphs: Erdos-Renyi ensemble, graphs with a prescribed degree distribution, giant components and percolation transition.

Language(s) of Instruction
English

Host Institution Course Number
6CCMCS02

Host Institution Course Title
THEORY OF COMPLEX NETWORKS

Host Institution Campus
King's College London/ Strand Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

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