

PhD position: Cooperative Network Games

I am looking for one talented PhD candidate with an M.Sc. degree (or close to completion) in Systems and Control, or Applied Mathematics, Electrical or Mechanical Engineering, or related field, with theoretical background and interest in System Theory, Automatic Control, Optimization, Game Theory, and with good command of the English language (knowledge of Dutch is not required).

The candidate will conduct multi-disciplinary research on complex multi-agent systems characterized by the presence of: (i) mixed cooperative and non-cooperative agents; (ii) huge volume of historic data (big data) and forecast of the uncertain variables; (iii) nonlinear system dynamics. The key challenges are to extract the knowledge hidden in the historic data, e.g. via statistical learning, and to coordinate the states and the decisions of the agents to an efficient equilibrium solution, e.g. via the principles of the sharing economy. Distributed statistical learning shall be developed for cooperative game theory. The main application area is distributed, peer-to-peer, energy trading in smart power grids.

Conditions of employment:

The PhD appointment is for 4 years. The PhD student will participate in the training and research activities of the TU Delft Graduate School and of the Dutch Institute of Systems and Control (DISC). As an employee of TU Delft, the PhD student will receive a competitive salary in accordance with the Collective Labour Agreement for Dutch Universities (CAO), from 2.2k EUR/month (gross, 1st year) to 2.8k EUR/month (gross, 4th year), possibly from 1.7k EUR/month (after taxes, 1st year) to 2.2k EUR/month (after taxes, 4th year), plus holiday allowance (8% of gross annual income) and end-of-year allowance (8.3% of gross annual income), travel budget, secondary benefits, discounts for health insurance and sport membership. Assistance with accommodation can be arranged.

Applications shall include the following documents:

- curriculum vitae;
- statement of motivation and research interests (up to one page);
- transcripts of all exams taken and obtained degrees (in English);
- names and contact information of up to three references (e.g. project/thesis supervisors);
- up to two research-oriented documents (e.g. thesis, conference/journal publication).

Applications or inquires shall be emailed to prof. Sergio Grammatico (s.grammatico@tudelft.nl).

The call for applications will remain open until the ideal candidate is found. The starting date is flexible, but ideally would be June—September 2018.