Modeling and learning social influence from opinion dynamics under attack

Abstract:

Opinion dynamics models aim at capturing the phenomenon of social learning through public discourse. While a functioning society should converge towards common answers, the reality often is characterized by divisions and polarization. This talk reviews the key models that capture social learning and its vulnerabilities. In particular, we review models that explain the effect of bounded confidence and social pressure from zealots (i.e. fake new sources) and show how very simple models can explain the trends observed when social learning is subject to these phenomena. We their influence exposes trust different agents place on each other and introduce new learning algorithms that can estimate how agents influence each other.





Anna Scaglione (M.Sc.'95, Ph.D. '99) is currently a

professor of Electrical Engineering previously at the at UC Davis (2010-2014), Associate

Her expertise is in the broad area of statistical signal processing for communication, electric power systems and networks. Her current research focuses on studying and enabling decentralized learning and signal processing in networks of sensors.

Dr. Scaglione was elected an IEEE fellow in 2011. She served as Associate Editor for the IEEE Transactions on Wireless Communications and on Signal Processing, as EiC of the IEEE Signal Processing letters. She was member of the Signal Processing Society Board of Governors from 2011 to 2014. She received the 2000 IEEE Signal Processing Transactions Best Paper Award and more recently was honored for the 2013, IEEE Donald G. Fink Prize Paper Award for the best review paper in that year in the IEEE publications, her work with her student earned 2013 IEEE Signal Processing Society Young Author Best Paper Award (Lin Li).

MONDAY, JAN 13, 2020 11:00 AM - 12:00 PM

Rogers Hall Rm 230

