

2021

DISTINGUISHED LECTURE SERIES

TOYOTA TECHNOLOGICAL INSTITUTE AT CHICAGO

April 15

Pietro Perona

California Institute of Technology

“A Sense for Number and Quantity as an Emergent Property of a Manipulating Agent”



Bio: Pietro Perona's research focusses on vision: how do we see and how can we build machines that see. Professor Perona is currently interested in visual recognition, more specifically visual categorization. He is studying how machines can learn to recognize frogs, cars, faces and trees with minimal human supervision, and how machines can learn from human experts. His project 'Visipedia' has produced two smart device apps (iNaturalist and Merlin Bird ID) that anyone can use to recognize the species of plants and animals from a photograph. In collaboration with Professors Anderson and Dickinson, Professor Perona is building vision systems and statistical techniques for measuring actions and activities in fruit flies and mice. This enables geneticists and neuroethologists to investigate the relationship between genes, brains and behavior. Professor Perona is also interested in studying how humans perform visual tasks, such as searching and recognizing image content.

[Register in advance here](#)

May 5

Maria Chudnovsky

Princeton University

“Induced Subgraphs and Tree Decompositions”



Bio: Maria Chudnovsky received her B.A. and M.Sc. from the Technion, and a PhD from Princeton University in 2003. Currently she is a professor at Princeton. Before returning to Princeton in 2015, she was a Veblen Research Instructor at Princeton University and the IAS, an assistant professor at Princeton, a Clay Mathematics Institute research fellow, and a Liu Family Professor of IEOR at Columbia University. Her research interests are in graph theory and combinatorics. She is an editorial board member of the Journal of Graph Theory, Discrete Mathematics and Journal of Computer and System Sciences. Dr. Chudnovsky was a part of a team of four researchers that proved the strong perfect graph theorem, a 40-year-old conjecture that had been a well-known open problem in both graph theory and combinatorial optimization. For this work, she was awarded the Ostrowski foundation research stipend in 2003, and the prestigious Fulkerson prize in 2009. She was also named one of the "brilliant ten" young scientists by *Popular Science Magazine*. In 2012, Dr. Chudnovsky received the MacArthur Foundation Fellowship. In 2014, she was an invited speaker at the International Congress of Mathematicians.

[Register in advance here](#)

June 14

Daniela Rus

Massachusetts Institute of Technology

“Learning Risk and Social Behavior in Mixed Human-Autonomous Vehicles Systems “



Bio: Daniela Rus is the Andrew (1956) and Erna Viterbi Professor of Electrical Engineering and Computer Science, Director of the Computer Science and Artificial Intelligence Laboratory (CSAIL) at MIT, and Deputy Dean of Research in the Schwarzman College of Computing at MIT. Rus' research interests are in robotics and artificial intelligence. The key focus of her research is to develop the science and engineering of autonomy. Rus is a Class of 2002 MacArthur Fellow, a fellow of ACM, AAAI and IEEE, a member of the National Academy of Engineering, and of the American Academy of Arts and Sciences. She is the recipient of the Engelberger Award for robotics. She is a senior visiting fellow at MITRE Corporation. She earned her PhD in Computer Science from Cornell University.

[Register in advance here](#)

All lectures begin at 11:10am CT

Attend virtually on Zoom

Event details at: www.ttic.edu/dls

