



# The Institute for Neural Computation 2019 Rockwood Memorial Lecture

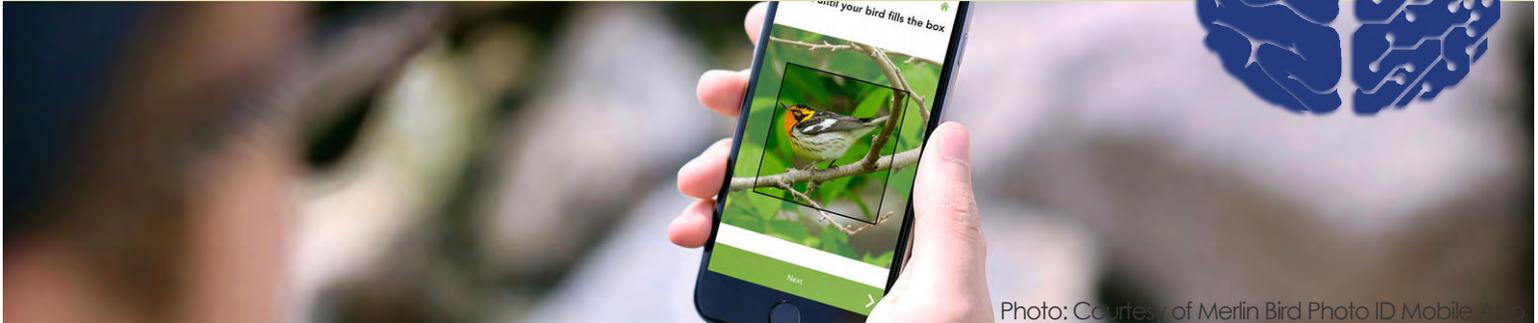
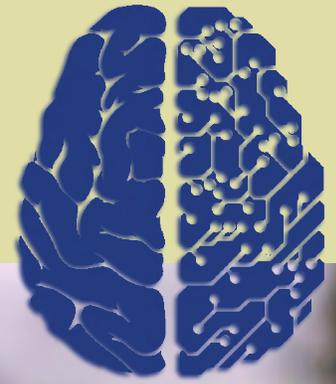


Photo: Courtesy of Merlin Bird Photo ID Mobile App



## Pietro Perona

The California Institute of Technology; Amazon Web Services  
May 30, 2019, 4 - 6 pm  
Sanford Consortium – Roth Auditorium  
2880 Torrey Pines Scenic Dr, La Jolla, CA 92037

### VISIPEDIA: PEOPLE, MACHINES, AND DATA WORKING TOGETHER TO ACHIEVE KNOWLEDGE

Each day we are faced with visual puzzles: What is the species of that bird? Is this mole on my arm dangerous? Who painted that picture? In most cases, an expert would be able to quickly inform us, but experts are few, busy and hard to reach. Would it not be nice if our smart device could be transformed into a universal visual expert? I will discuss the challenge of building Visipedia, a network of people, data and machines that is designed to harvest, validate and organize visual expertise and make it accessible to anyone anywhere. I will explore the technical challenges arising from Visipedia and discuss their implications for computer vision, machine learning, artificial intelligence, human-machine systems and visual psychology. I will present data from large-scale experiments carried out by building systems that people use every day (you may download iNaturalist and Merlin Bird ID to your smart device and play with them ahead of this talk). I will conclude by discussing open challenges for Computer Vision and Machine Learning researchers. (Joint work with Serge Belongie of Cornell Tech).

### ABOUT THE ROCKWOOD MEMORIAL LECTURE

The H. Paul Rockwood Memorial Lectures are endowed to the Institute by Mr. and Mrs. Jerome Rockwood in memory of their late son's interest, studies, and work in the neural computation field. Paul Rockwood received a B.S. in Computer Science from UC San Diego in 1980 and a second B.A. degree in Psychology in 1981. In 1983, he started a company, Integral Solutions, to develop universal language translation, but died tragically in a mountaineering accident before he could fulfill his promise.

Hosts: Terrence Sejnowski and Gert Cauwenberghs  
For questions, please contact Stephanie Corneil at [scorenil@ucsd.edu](mailto:scorenil@ucsd.edu)

