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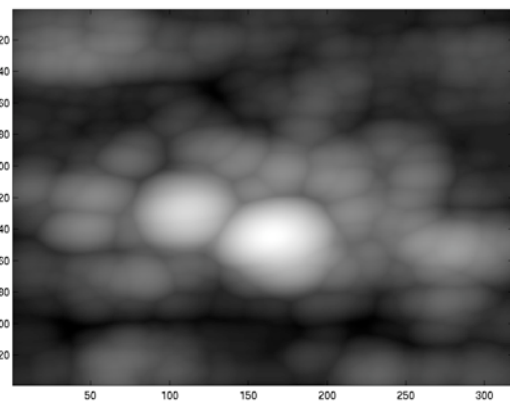
College of Science

Chester F. Carlson

Center for **IMAGING** SCIENCE

Seminar Series

Flexible Template Models for Detecting and Recognizing Objects in Images



Daniel Huttenlocher

*Neafsey Professor of Computing, Information Science and Business
Cornell University*

4pm, Wed, Feb 7, 2007

Auditorium of the Center for Imaging Science

Recent progress in object category recognition systems rely on detectors for locally invariant features and application of machine learning techniques. These methods are unreliable because of ambiguity due to the absence of contextual information.

We present an approach with no separate feature detection stage. Objects are treated as local patches with spring-like connections constraining spatial relationships. Such intuitively natural models date back over 30 years but have been largely abandoned due to computational challenges that are now addressed by our work. Our method works well on weakly labeled training data without manual locating of objects or their parts. The recognition accuracy is better than feature-based techniques even when similar forms of spatial constraint are introduced.

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Speaker Bio

Dan Huttenlocher is the John P. and Rilla Neafsey Professor of Computing, Information Science and Business at Cornell University, where he holds a joint appointment in the Computer Science Department and the Johnson Graduate School of Management. His research interests are in computer vision, electronic collaboration tools, social and information networks, computational geometry and financial trading systems. In addition to academic posts he has been chief technical officer of Intelligent Markets, a provider of advanced trading systems on Wall Street, and spent more than ten years at Xerox PARC directing work that led to the ISO JBIG2 image-compression standard.