Workshop on

Learning Data Representation: Hierarchies and Invariance
November 22-24, 2013 | McGovern Institute for Brain Research, MIT
http://lcsl.mit.edu/ldr-workshop

Workshop Schedule

Friday Nov. 22, 2013 (MIT Bldg 46-3002, Singleton Auditorium)

14:30 Introduction to the Workshop

Session: Early Features in Vision | Chair: C. Tomasi

14:50 Filters and other potions for early vision and recognition (P. Perona)
15:30 Transformations in early vision from a symmetry argument (C. Stevens)
16:10 Break
16:40 Feedforward hierarchical models of visual processing in visual cortex (T. Serre)
17:20 Panel discussion: C. Tomasi (moderator), W. Freeman, G. Sandini + Speakers

8:00 Reception at Catalyst Restaurant

Saturday Nov. 23, 2013 (MIT Bldg 46-3002, Singleton Auditorium)

8:30am Breakfast

Session: Learning Features and Representations | Chair: A. Verri

9:30 Data representation, compressed sensing and matrix factorization (B. Recht)
10:10 Dictionary learning and all that (G. Sapiro)
10:50 Break
11:20 Panel discussion: A.Verri (moderator), L. Rosasco, M. Belkin, J. Buhmann + Speakers

12:20 Lunch
**Session:** Learning Invariances and Hierarchies | Chair: J. DiCarlo

14:00 Learning invariant feature hierarchies (Y. LeCun)
14:50 Scattering bricks to build invariants for perception (S. Mallat)
15:40 Break
16:10 M-theory (T. Poggio)
17:00 Panel discussion: J. Di Carlo (moderator), P. Baldi, M. Riesenhuber + Speakers

18:30 Dinner (up to individual participants)

**Sunday Nov. 24, 2013 (MIT Bldg 46-3002, Singleton Auditorium)**

8:30am Breakfast

**Session:** Beyond Feedforward Architectures | Chair: J. Tenenbaum

9:00 The role of mobility and control in the inference of representations (S. Soatto)
9:40 Atoms of recognition (S. Ullman)
10:20 Break
10:50 Compositional models: complexity of representation and inference (A. Yuille)
11:30 Panel discussion: J. Tenenbaum (moderator), R. Salakhutdinov + Speakers

12:30 Final remarks