

Multi-Trade-offs
in
Machine Learning
NIPS-2012 Workshop

Individual Trade-offs

- Model Order Selection
 - Trade-off between modelling resolution and statistical reliability
- Exploration-exploitation
- ...

Multi-Trade-offs

- The sleeping bag problem
 - Warm
 - Lightweight
 - Cheap
- Multiple tasks, common resources
 - Computational
 - Body
 - ...
- Single task, multiple constraints
 - Time, accuracy, sample, ...

Organizers

- Yevgeny Seldin – Queensland University of Technology
- Guy Lever – University College London
- John Shawe-Taylor – University College London
- Koby Crammer – Technion
- Nicolò Cesa-Bianchi - Università degli Studi di Milano
- François Laviolette - Université Laval
- Gábor Lugosi – Pompeu Fabra University
- Peter Bartlett – UC Berkeley and Queensland University of Technology

Sponsors



PASCAL2

Pattern Analysis, Statistical Modelling and
Computational Learning

Schedule

07:30 - 07:40 Opening remarks

07:40 - 08:35 Csaba Szepesvári - "Tradeoffs in online learning under partial information feedback"

08:35 - 08:55 Giovanni Cavallanti - "Memory Trade-offs in Online Multitask Classification"

08:55 - 09:25 *coffee break*

09:25 - 09:35 Pascal Germain - "PAC-Bayesian Learning and Domain Adaptation"

09:35 - 10:30 Shai Shalev-Shwartz - "The approximation-estimation-computational tradeoff"

10:30 - 15:30 *ski break*

15:30 - 16:25 Jan Peters

16:25 - 16:45 Pierre Machart - "Optimal Computational Trade-Off of Inexact Proximal Methods"

16:45 - 17:05 Huan Xu "Sparse Algorithms are not Stable: A No-free-lunch Theorem"

17:05 - 18:30 *coffee break* + **poster session**