High Dimensional Hamilton-Jacobi PDEs Tutorials

Tuesday March 10, 2020

8:00–8:55 *Check-In/Light Breakfast (Hosted by IPAM)*

8:55–9:00 *Welcome & Opening Remarks: Dean Miguel García-Garibay (Dean of Physical Sciences, UCLA) and Dima Shlyakhtenko (Director, IPAM)*

9:00–10:15 **Adam Oberman** (McGill University)
Generalization Theory in Machine Learning

10:15–10:45 *Break*

10:45–12:00 **Adam Oberman** (McGill University)
Gradient descent, Stochastic gradient descent, and acceleration

12:00–12:30 *Core Orientation with IPAM Staff*

12:30–2:00 *Lunch (on your own)*

2:00–3:15 **Claire Tomlin** (University of California, Berkeley (UC Berkeley))
Towards Real-Time Reachability, Part 1

3:15–3:45 *Break*

3:45–5:00 **Claire Tomlin** (University of California, Berkeley (UC Berkeley))
Towards Real-Time Reachability, Part 2

Wednesday March 11, 2020

8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*

9:00–10:15 **Wilfrid Gangbo** (University of California, Los Angeles (UCLA))
Analytical Aspect of Mean Field Games, Part 1

10:15–10:45 *Break*

10:45–12:00 **Wilfrid Gangbo** (University of California, Los Angeles (UCLA))
Analytical Aspect of Mean Field Games, Part 2

12:00–2:00 *Lunch (on your own)*

2:00–3:15 **Jeff Calder** (University of Minnesota, Twin Cities)
An introduction to concentration of measure with applications to graph-based learning, Part 1

3:15–3:45 *Break*

3:45–5:00 **Jeff Calder** (University of Minnesota, Twin Cities)
An introduction to concentration of measure with applications to graph-based learning, Part 2

Thursday March 12, 2020

8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*

9:00–10:15 **Levon Nurbekyan** (University of California, Los Angeles (UCLA))
Computational methods for mean-field games, Part 1

10:15–10:45 *Break*

10:45–12:00 **Levon Nurbekyan** (University of California, Los Angeles (UCLA))
Computational methods for mean-field games, Part 2

12:00–2:00 *Lunch (on your own)*

2:00–3:15 **Dejan Slepcev** (Carnegie Mellon University)
Variational problems and PDE on random structures, Part 1

3:15–3:45 *Break*

3:45–5:00 **Dejan Slepcev** (Carnegie Mellon University)
Variational problems and PDE on random structures, Part 2

Friday March 13, 2020

8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*

9:00–10:15 **Gary Hewer** (Naval Air Warfare Center)
Hamilton-Jacobi Pontryagin Maximum Principle and Real-Time Optimal control

10:15–10:45 *Break*

10:45–12:00 *Discussion*