

Mathematical Approaches for Traffic Flow Management Tutorials

Wednesday September 9, 2015

- 8:00–9:00 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:00–10:15 **Benjamin Seibold** (Temple University)
A mathematical introduction to traffic flow theory: Part I
- 10:15–10:45 *Break*
- 10:45–12:00 **Hans van Lint** (Technische Universiteit te Delft)
Traffic state estimation basics: Part I
- 12:00–12:30 *Core Orientation with IPAM Staff*
- 12:30–2:00 *Lunch (on your own)*
- 2:00–3:15 **Cynthia Chen** (University of Washington)
At least three decades' active research in travel behavior (aka human mobility) analysis: Part I
- 3:15–3:45 *Break*
- 3:45–5:00 **Alexander Skabardonis** (University of California, Berkeley (UC Berkeley))
A primer on ramp metering, traffic signal, and variable speed limit control: Part I

Thursday September 10, 2015

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–10:15 **Benjamin Seibold** (Temple University)
A mathematical introduction to traffic flow theory: Part II
- 10:15–10:45 *Break*
- 10:45–12:00 **Hans van Lint** (Technische Universiteit te Delft)
Traffic state estimation basics: Part II
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:15 **Cynthia Chen** (University of Washington)
At least three decades' active research in travel behavior (aka human mobility) analysis: Part II
- 3:15–3:45 *Break*
- 3:45–5:00 **Alexander Skabardonis** (University of California, Berkeley (UC Berkeley))
A primer on ramp metering, traffic signal, and variable speed limit control: Part II



Friday September 11, 2015

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–10:15 **Benjamin Seibold** (Temple University)
A mathematical introduction to traffic flow theory: Part III
- 10:15–10:45 *Break*
- 10:45–12:00 **Daniel Work** (University of Illinois at Urbana-Champaign)
Sequential traffic estimation: Part I
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:15 **Christian Claudel** (University of Texas at Austin)
Hamilton-Jacobi formulation of first order scalar conservation laws: theory and computational methods
- 3:15–3:45 *Break*
- 3:45–5:00 **Alexander Skabardonis** (University of California, Berkeley (UC Berkeley))
A primer on ramp metering, traffic signal, and variable speed limit control: Part III

Saturday September 12, 2015

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–10:15 **Daniel Work** (University of Illinois at Urbana-Champaign)
Sequential traffic estimation: Part II
- 10:15–10:45 *Break*
- 10:45–12:00 **Christian Claudel** (University of Texas at Austin)
Applications of Hamilton-Jacobi equations to network traffic state estimation and control
- 12:00 *Conclusion*

