CDC 2018 Workshop:
Traffic Flow Control via PDE Techniques
December 16, 2018
Room: Splash 10, Fontainebleau Hotel, Miami Beach, FL
Organizers:
Nikolaos Bekiaris-Liberis, Technical University of Crete
Maria Laura Delle Monache, Inria
Delphine Bresch-Pietri, MINES ParisTech
Rafael Vazquez, University of Seville
Agenda:

08.30–08.45:
Introduction, motivation, and outline of the workshop
Session 1: Ramp metering and speed limits control
08.45–09.30:
Calming "stop-and-go" in congested traffic, by Miroslav Krstic, University of California, San Diego, USA
09.30–10.15:
Recent advances on Lyapunov-based control for traffic flow, by Christophe Prieur, CNRS, France
10.15–10.30:
Coffee break
10.30–11.15:
Feedback control of scalar conservation laws with application to density control in freeways by means of variable speed limits, by Iasson Karafyllis, National Technical University of Athens, Greece
11.15–12.00:
A fast semi-analytic algorithm for computing solutions associated with multiple fixed or mobile capacity restrictions: applications to bus holding control, by Christian Claudel, University of Texas at Austin, USA
12.00–12.30:
Can big data help traffic flow control?, by Maria Laura Delle Monache, Inria Grenoble-Rhone Alpes, France
12.30–14.00:
Lunch break
Session 2: Control via connected & automated vehicles
14.00–14.45:
Lagrangian controls for traffic flow with autonomous and connected vehicles, by Benedetto Piccoli, Rutgers University, USA
14.45–15.30:
Macroscopic modeling of traffic control by autonomous vehicles, by Paola Goatin, INRIA, France
15.30–15.45
Coffee break
15.45–16.30:
Mitigating traffic waves with connected automated vehicles, by Gabor Orosz, University of Michigan, Ann Arbor, USA
16.30–17.00:
Traffic flow control via PDEs: Delay-compensating and fault-tolerant designs, by Nikolaos Bekiaris-Liberis, Technical University of Crete, Greece
17.00–17.15:
Concluding remarks