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Diversity-aware design of sustainable mobility solutions: a control-oriented approach

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Abstract:

The urgency of implementing effective solutions and support policies to foster sustainable mobility as a means to support the energy transition and mitigate climate change is ever increasing. Further, the success of the support policies is closely intertwined with the necessity of preserving a delicate social balance when allocating resources toward a widespread transition. To address these issues, this talk presents a control-oriented framework to aid policymakers in designing and evaluating sustainability policies that are both effective and fair. The modular design of the tool enables the assessment of fairness objectives integrated within the policy design strategy, striking a balance between impartial equality and inclusive equity with the imperative of cost minimization and effective diffusion of the transition process.



Bio: Mara Tanelli is a Full Professor of Automatic Control at the Department of Electronics, Information and Bioengineering (DEIB) of the Politecnico di Milano. Her research activities focus on active control of vehicles dynamics, smart and inclusive mobility, industrial analytics and sliding-mode control. She is co-author of more than 200 scientific publications and more than 20 patents in these research areas. She is currently Associate Editor for the IEEE Transactions on Human-Machine Systems. From 2021 to 2023 she was Chair of the Technical Committee on Automotive Control of the IEEE Control Systems Society and Vice Chair for publications of the IFAC Technical Committee on Automotive Control. At Politecnico di Milano she is Rector's Delegate for Diversity and Inclusion.