

Challenge@PoliTo *By Students*

New Opportunities from Autonomous and Connected Mobility

March – June 2021

CALL for IDEAS

The research and technological development in the field of electric, autonomous and connected vehicles are growing up fast and we are witnessing the transition towards a new paradigm of individual and shared mobility.

The vehicles and the connected infrastructures are characterized by more and more technological content that will help to improve the safety and the comfort of the vehicle occupants and the pedestrians in the surrounding, as well as the quality of urban and sub-urban transport.

Technology advances however come with an increase of the complexity and cost.

Thus, starting from the opportunities derived by these novel technologies, it is crucial to address the following open questions:

- what are the additional benefits coming from these technologies that have not been yet exploited?
- How can we leverage them to make transport systems safer and enhance their quality and efficiency?
- Which are still unexplored applications and innovation aspects, possibly leading to an improved, sustainable mobility?

CHALLENGE

The challenge aims at identifying, developing, and implementing sustainable concepts allowing for a better exploitation of the benefits coming from automated and connected mobility.

Advances in the following areas are expected:

- definition and design of methodologies leveraging the signals coming from the vehicle sensors (cameras, radars, lidar) to recognize urban scenarios and detect and manage potential anomalies so as to trigger proper correcting actions (unexpected or unrecognized open construction sites, vehicles not correctly parked, garbage containers not correctly placed...).
- design and implementation of the most efficient methods and approaches to recognize ground irregularities in order to improve vehicle dynamic stability strategies.
- improvements in the design of vehicle motion control strategies that may come from the use of sensors, and implementation of such enhanced strategies.

This activity will be recognized within your educational plan with 8 CFU credits.

Check your institutional email and read the regulation carefully, then apply at www.challengeatpolito.it

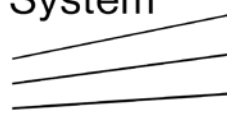
SIGN UP NOW! Places are limited!

For any questions, write to clik@polito.it



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