The scientific activity of Claudio Meneguzzer relates to the field of transportation system analysis, planning, management and operations, with specific emphasis on road network analysis and control.

In particular, he has carried out or is currently carrying out research on the following topics:

- Analysis of traffic flow in road networks;
- Traffic assignment models, in particular stochastic user equilibrium models and equilibrium models with asymmetric interactions;
- Dynamic traffic assignment models;
- Combined traffic assignment and signal control models;
- Dynamic process models and equilibrium stability in transport networks;
- Accident prediction models;
- Analysis of driver behaviour at road intersections;
- Application of fuzzy system theory to transportation system modelling;
- Transferability of probabilistic models and fuzzy models of gap acceptance behaviour;
- Interactions between vehicular and pedestrian flows on roundabout approaches;
- Experimental analysis of day-to-day route choice dynamics in road networks;
- Analysis of pollutant emissions produced by vehicular traffic in road networks.