



Search for a PhD-student and a Postdoctoral researcher:

Agent-based simulations of moral equilibria (norms): Applications in transport and beyond

To help execute a research program which aims to develop and empirically validate new model systems for understanding and predicting moral decision making, we are hiring a PhD-student (4 year appointment) and a Postdoctoral researcher (2.5 year appointment).

The BEHAVE-research program is funded by a 2 million euro personal grant from the Consolidator scheme of the European Research Council (ERC). Lead by PI Caspar Chorus, professor of choice behavior modeling and head of the Transport and Logistics group at TU Delft, the program will be implemented by a 10-person strong team of hired researchers and existing TU Delft Faculty.

The first, currently ongoing stage of the program focuses on the moral behavior at the disaggregate level; it includes developing and empirically validating mathematical (econometric) formulations of human decision making in moral choice contexts. Empirical work is taking place in the context of travel behavior related case studies, with particular focus on social routing and on traffic safety.

This advertisement refers to the second stage of the program, which focuses on aggregate level moral phenomena. **Using agent-based models, the emergence, persistence and dissolution of moral equilibria (norms) is studied.** Crucially, models will be equipped with empirically validated moral decision rules which are identified in the first stage of the program. A case study on social routing-based 'moral traffic equilibria' will use the MATSim-framework. The other subproject will focus on traffic safety norms in society at large (i.e., it studies societal as opposed to traffic equilibria). We aim for impact in the transport domain but also beyond, e.g. in the social simulation field.

Promising candidates have a strong background in modeling and simulation (not necessarily, but preferably agent-based). They are willing to engage with literature on social simulation, and to explore moral aspects of (travel) behavior. A background in transportation is no prerequisite, but helpful. We are looking for inquisitive, creative, analytical and highly motivated team players.

Both positions are based on full-time contracts as employees; ample budget is available for training, conference visits, data collection, and open access publications. The preferred starting date is Spring/Summer 2018 (PhD-candidate) and Fall 2018 (Postdoc). Positions are open from now onwards, until suitable candidates have been found.

Are you interested? Please send an email to Caspar Chorus (c.g.chorus@tudelft.nl), including a short CV and a one-page motivational statement. More information about the kind of ideas that are central to the BEHAVE-program can be found here: <http://dx.doi.org/10.1016/j.iocm.2015.08.001> .