



# POLITECNICO DI TORINO

Vehicle Concept Modelling (“VECOM”) Marie Curie Initial Training Networks FP7-PEOPLE-2007-1-1-ITN

## Visiting Scientist Senior recruitment at PoliTO – two months available since January 2011 till September 2012

### Objectives

The aim of the proposed training network is to provide dedicated research training in the emerging field of vehicle concept modelling for up-front pre-CAD functional performance engineering, bridging between industry and academia across Europe. The research area is of highly strategic importance to European automotive OEMs, who must launch products on an ever shorter time frame, at increased quality of multiple performance attributes. When simulation results become available in an early design stage, problems can already be solved before the first detailed CAD model is created, which will increase the quality of the first detailed simulation models and reduce the time to market. Moreover, early what-if studies can be performed to balance and optimize possibly conflicting performance attributes (safety, NVH, dynamics, durability ...) at an increased feasibility and at reduced costs. Novel methods will be developed to address this industrial need for a novel engineering process in which analysis leads the design. Applications will be worked out across partners and application fields, fully embedded in the vehicle industry context. Apart from benefits to researchers, partners and supervisors (OEMs), the proposed project will strengthen the competitive position of the European vehicle industry in the increasingly global market.

The Senior Visiting Scientist will be involved by PoliTO in the field of ride, handling and chassis design. The PoliTO VECOM research team has the special mission to contribute in the field of vehicle dynamics and especially regard the methodologies currently applied to move the vehicle models in real-time test benches designed according to an Hardware-in-the-loop (HIL) scheme. Similarly, PoliTO has the finalization to contribute to the VECOM consortium about how a vehicle dynamics model can be used in a vehicle equipped as Mobile Laboratory.

The profile required is then corresponding to that of a Professor with documented long-term experiences in the field of systems applied to the vehicle to increase performance in terms of dynamics, safety and energy saving.

The ideal candidates profile regard experts in the field of control systems applied to chassis, hybrid powertrain, innovative transmissions and, more in general, vehicle dynamics modeling.

The call is opened also to experts coming from the Industry with a CV in the field of research applied to the vehicle dynamics and the subjects formerly indicated.

### ***Reference person in PoliTO to be contacted***

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