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POST-DOCTORAL RESEARCH ASSISTANT
ASSEGNO DI RICERCA POST-DOTTORATO

DURATION: 24 months.

TOPIC: Design of innovative helmets for motorcyclists.

ABSTRACT: a position is vacant within a research project supported by the CARIPARO foundation. The project is on the design of innovative helmets for motorcyclists [1-3] and is based on a strict collaboration between the Department of Industrial Engineering and the Department of Neurosciences at Padova university; the company Dainese SpA is also involved.
The vacancy is within the engineering branch of the project: we are looking for an expert in the Finite Element Method, someone who is able to work with commercial software, complex models and with a large number of degrees of freedom. The candidate will be more involved in the engineering side of the research but s/he will nonetheless be expected to collaborate with medical doctors and biomechanics experts. The candidate will generate models of the new helmet liner concepts, of the helmets, couple them with head models and virtually test them. S/He will collaborate with the other researchers on the project for the definition of the constitutive material properties and will interact with Dainese's staff whenever necessary.

[1] Mohammad Nasim, Michele Brasca, Siamak Farajzadeh Khosroshahi, Ugo Galvanetto, 'Understanding the impact properties of polymeric sandwich structures used for motorcyclists' back protectors', Polymer Testing, 2017.
[2] S. Farajzadeh Khosroshahi, S.A. Tsampas, U. Galvanetto, (2018) 'Feasibility study on the use of a hierarchical lattice architecture for helmet liners', Materials today communications, Vol. 14, 312-323.
[3] S. Farajzadeh Khosroshahi, M.Wysocki, R. Olsson, M. Zaccariotto, U. Galvanetto, "Response of a helmet liner under biaxial loading", accepted manuscript, Polymer Testing, DOI: 10.1016/j.polymertesting.2018.10.012.

STARTING DATE: between February and April 2019
SALARY: approx. 25150 €/year gross

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