

Post Doctoral Position (M/F)

Electrical engineering, Control, Mechatronic design

Tactile Display : control and evaluation

12 months

IRCICA

starting 2018 January 1st

early application possible

Key Words :

Mechatronics, tactile interface, real time control, simulation, identification.

Context :

This position is for the project SIMATEC, which is financed by the “Hauts de France” region within the framework of StartAIRR project. These projects aim at giving an industrial future to the research and development of the laboratories.

SIMATEC starts from the fact that new technologies providing a rich and a high fidelity tactile feedback now exist and will be available on consumer devices soon. The objective of SIMATEC is then to take advantage of these new technologies in order to enrich a user’s experience when using a device with such tactile feedback. The L2EP has developed e-Vita, a tablet which not only gives auditory and visual feedback, but can let a user think that he is touching what he’s seeing. For that purpose, a specific control of actuators located on the tablet’s surface can modify the perception of the touchscreen, and we can actually feel it as a rough surface like fabrics.

This project is supported by the “Hauts de France” region which is well known for its economic activities around fabrics and e-trade, and this project may be applied to both fabrics design and fabrics simulation to help remote purchase.

Objectives:

Starting from an existing technology, the objective of the Post-Doctoral fellow is to:

Generate the references to be used for the control of a tactile display like e-Vita, in order to simulate the haptic feedback of predefined surfaces (identification)

Control the device using appropriate controllers (control)

Assist the evaluation team in charge of quantifying the level of accuracy of the simulation

Candidate Experience:

PhD in electrical engineering, control or mechatronics is welcome

Experimental background and experience,

Dynamic, easily working in a team,

Application:

Send CV + Motivation letter (English or French)

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