

Featuring in France's Brain Research Festival “Semaine du Cerveau”

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In december 2013, the CNRS (*Centre National de la Recherche Scientifique*) visited the *Institut des Systèmes Intelligents et de Robotique*, the PROTOTOUCH partner based at *Université Pierre et Marie Curie* in Paris. Their visit, coordinated by ESR Séréna Bochereau (right), was aimed at visually documenting different tactile illusions developed and explained by Vincent Hayward's research group. These illusions are based on exploiting the limits and expectations of the somatosensory system and trick the brain by stimulating specific cues. Such devices include the Latero, an array of 64 pins vibrate tangentially creating the sensation of lowering the finger by a few millimeters, and the Pantograph, a force-feedback device which implements attractive and repulsive forces creating the sensation of swiping over a hole or going over a bump. In particular, the virtual rolling stone (right) was chosen to feature in a photo album created for the “Semaine du Cerveau”. By moving the stick up and down, the participant feels that a marble is rolling up and down the stick. In reality, vibrations and sounds, correlated with the orientation of the stick held by the participant, are stimulated directly under the hand by a motor to create this sensation of movement.



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The “Semaine du Cerveau” is a festival held in over 30 cities across France during which researchers share their enthusiasm to “understand what makes us understand”. Organised by the *Société des Neurosciences*, it aims to sensitize the general public to the importance of brain research. In haptics, understanding perceptual invariants and how the brain processes tactile sensations are instrumental to creating devices which can realistically stimulate natural tactile sensations.



EN EUROPE ET DANS PLUS DE 30 VILLES EN FRANCE

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www.semaineducerveau.fr

