

Call for Papers
Special issue on Cross-Disciplinary Approaches to
Embodied Knowledge of Human Skill

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Submission Deadline: February 21, 2011

Expertise in sports, music performance, dance, and craftsmanship is increasingly attracting researchers from diverse backgrounds seeking to deepen the understanding of outstanding human skills -- an area known as "skill science."

The goal of skill science is to clarify neural, cognitive, and computational mechanisms and processes underlying superior human sensorimotor functions. Cross-disciplinary approaches include artificial intelligence, computational intelligence, soft computing, robotics, biomechanics, cognitive science, and neuroscience.

Skill science is important both for developing comprehensive models of embodied knowledge and for practical applications. Quantitative evaluation and precise modeling of human skill are, for example, indispensable for developing hardware and software that mimics human functions and for designing robots and Brain-Machine Interface (BMI) that enables dexterous human-like behavior. It is also of academic and clinical importance to determine mechanisms for acquiring complex sensorimotor skills.

This special issue includes a variety of papers focusing on new modeling approaches and cutting-edge empirical techniques shedding light on embodied knowledge. We believe this special issue will serve as a landmark for further developing skill science research.

- Skill Science
- Cognitive Science
- Motor Control
- Brain-Computer Interface (BCI) / Brain Machine Interface (BMI)
- Human Embodied Knowledge
- Neuroscience
- Soft Computing

Papers are invited from prospective authors with interest on the related areas.

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