SOFTWARE QUALITY JOURNAL SPECIAL ISSUE ON:
REALIZING ARTIFICIAL INTELLIGENCE SYNERGIES IN SOFTWARE ENGINEERING

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Important Dates:
Submission Due: 30 November 2014
First Round Reviews: 30 January 2015
Revised Papers Due: 1 March 2015
Notifications: 1 May 2015

CALL FOR SPECIAL ISSUE SUBMISSIONS

With its boundaries expanding into other disciplines and fields as the computers become ubiquitous, Software Engineering (SE) is expected to solve a plethora of increasingly complex questions that are dynamic, automated, adaptive, or must execute at a very large scale. In theory, there could be another layer of collaboration between SE and other disciplines in addition to employing software systems of varying complexity. For example, Artificial Intelligence (AI) technologies can support the development of increasingly complex SE systems as in the case of recommendation systems. Conversely, in theory, SE might also play a role in alleviating development costs and the development effort associated with AI tools and applications such as robotics where proper development and testing practices are of utmost importance from both cost and robustness perspectives. Unfortunately, in practice, such collaborations between SE and AI are rarely achieved. This begs the question:

"Are SE and AI researchers ignoring important insights from AI and SE?"

This special issue is pursuing for contributions that explore not only the application of AI techniques to software engineering problems but also the application of software engineering techniques to AI problems. This call is open to all interested parties, and all submissions will be subject to Software Quality Journal’s rigorous acceptance criteria.

Topics of interest (Including but not limited to):

1. **Improving SE through AI** – Knowledge acquisition, knowledge representation, reasoning, agents, machine learning, machine-human interaction, planning and search, natural language understanding, problem solving and decision-making, understanding and automation of human cognitive tasks, AI programming languages, reasoning about uncertainty, new logics, statistical reasoning, software analytics.
2. **Applying AI to SE activities** – Requirements, design, specification, traceability, program understanding, model-driven development, testing and quality assurance, domain-specific software engineering, adaptive systems, software evolution.
3. **SE for AI** – AI programming languages, program derivation techniques in AI domains, platforms and programmability, software architectures, rapid prototyping and scripting for AI techniques, software engineering infrastructure for reflective and self-sustaining systems.
4. **Deployed Applications of AI or SE** – Papers that describe a deployed SE application in AI domain or an AI application in SE domain including but not limited to robotics software development and recommendation systems in SE.

Submission: