Preface

Although it seems clear that creativity plays an important role in developing intelligent systems, it is less clear how to model, simulate, or evaluate creativity in such systems. In other words, it is often easier to recognize the presence and effect of creativity than to describe or prescribe it. The purpose of this symposium is to explore the synergies between creative cognition and intelligent systems in a cross-disciplinary setting that fosters cooperation both in designing creative systems and in creatively designing systems. This focus on creativity in the context of intelligent systems has the potential for increasing innovation in existing fields of research as well as for defining new fields of study, including the following:

1. *Artificially Creative Systems:* development of new types of intelligent systems that produce or simulate creativity using novel approaches to reasoning, searching, and representing knowledge. These systems may be inspired by human creativity or by the possibilities of artificial systems beyond human capabilities.

2. *Computational Models of Human Creativity:* construct cognitive models of human creativity that can be the basis for computational creativity.

3. *Intelligent Systems for Supporting Creativity:* produce user interfaces, interaction design, decision support, and data modeling techniques that lead to the development of intelligent assistants that support the user in being more creative.

A list of potential topics that fall under the scope we envision is rather extensive, and we hope that the symposium stimulates further work in such areas as paradigms for understanding creativity, including heuristic search, analogical reasoning, and re-representation; creativity in different disciplines, including design, art, music, and science; perspectives on creativity, including models of human behavior, intelligent systems, and creativity-support tools; the role of creativity in learning, innovation, improvisation, and other pursuits; factors that enhance creativity, including conflict, diversity, knowledge, intuition, reward structures, and technologies; and social aspects of creativity, including the relationship between individual and social creativity, diffusion of ideas, collaboration and creativity, formation of creative teams, and simulating creativity in social settings.

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