

Preface

Mixed-initiative (MI) problem solving concerns the development of cooperative assistants whose user interactions are determined by problem-solving context and the relative knowledge and skills of system and user rather than by fixed roles. By dynamically integrating the contributions of the user and system, such systems enable each to contribute what it does best. Moreover, dynamic and flexible user-interaction facilitates adaptation to differences in knowledge, experience, and preferences among different users and to changes in needs and preferences in individual users over time.

Unfortunately, few MI systems have been deployed. Development of mixed-initiative systems gives rise to several challenging issues, including dialogue management, user modeling, goal recognition, domain modeling, learning, and problem-solving strategy selection. Those systems that have been implemented have typically been quite domain specific, which has impeded their reuse for other tasks.

The goal of this symposium is to identify the principles underlying the design of MI systems and to encourage their development and application. Towards this goal, this workshop provides a forum for interested researchers to share, discuss, and learn about experiences with, best practices on, and general issues concerning mixed-initiative problem-solving approaches, such as: Agent interfaces; Case studies of successful MI systems; Characterization of domains amenable to MI approaches; Comparisons of MI systems; Conversational case-based reasoning; Conversational problem solving; Dialogue management and discourse grammars; Dialogue recovery strategies; Exploiting user feedback; Evaluation methodologies, metrics, and measures; Explanation strategies and techniques; Initiative sharing strategies; Intelligent assistants; Intelligent tutoring systems; Intelligent and adaptive user interfaces; Knowledge acquisition; Knowledge capture; Learning apprentice systems; Learning strategies for MI systems; MI planning and scheduling systems; Novel MI approaches and applications; Personalization; Problem and plan recognition; Recommender systems; Task modeling for MI systems; Task-oriented interfaces; and User modeling.