FOREWORD

Tutorial Dialogue Systems are an area of tremendous growth in the research field of Intelligent Tutoring Systems, particularly over the past 5 years. As a sign of the level of maturity of this area of research, a few tutorial dialogue systems are now starting to make their way into classrooms for experimental use. Large scale laboratory evaluations of such systems are beginning to become commonplace. The results of these experiments have sometimes been very encouraging, and other times somewhat puzzling. There are a large number of pressing questions than need to be explored further. Therefore, the purpose of this workshop is to spend time together as a community in order to discuss where we are and where we are going with respect to the goal of producing a dramatically more effective generation of tutoring systems.

We were pleased to accept nine papers covering a range of relevant topics. Two papers discuss what we as a community can learn from studies of human-human tutoring transcripts that may be helpful both for informing the development of effective systems and for avoiding pitfalls when designing evaluation experiments. Person and Graesser present an overview of the wealth of knowledge gained from 15 years of experience analysing human-human transcripts and building tutorial dialogue systems. Rosé et al. present a comparison between two experiments suggesting that the benefits of human tutoring may be more obvious with students encountering information for the first time.

Three evaluation papers give a taste of the state-of-the-art in tutorial dialogue systems at the cutting edge, out on the front lines. Aleven et al. and Marriott et al. present full system evaluations of tutorial dialogue systems evaluated in a classroom setting. Popescu et al. present encouraging results for their language understanding approach used in the Aleven et al. study. Anyone who has participated in the development of a tutorial dialogue system knows that it is a major knowledge engineering effort. Addressing this important problem, Susarla et al. describe work on authoring tools for speeding up the process of developing domain knowledge sources for AutoTutor. Finally, three papers describe system overviews and architectural discussions about three different tutorial dialogue systems. Schulz et al. describe a scalable and reusable architecture for building tutorial dialogue systems for different domains. Their system is notable as one of the few speech based tutorial dialogue systems currently under development. Guitierrez and Reyes describe how finite state automata are used at every level in their tutorial dialogue framework. Finally, Wiemer-Hastings et al. present a system overview of their Research Methods tutor along with plans for extensive classroom evaluation.

We’d like to thank our organizing committee for supporting us in the incredibly rewarding task of putting together this workshop. It wouldn’t have been possible without all of you! Looking over our line-up of papers, we’re proud of the progress our community has made in the past year, especially with respect to getting tutorial dialogue systems out into the classroom where the need is.

We look forward to an exciting workshop in Sydney!

Carolyn Penstein Rosé and Vincent Aleven.
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Tutorial Dialogue Systems: with a view toward the classroom

Vincent Aleven and Carolyn Penstein-Rosé

SUNDAY, JULY 20TH, 2003