

# Preface

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The increasing complexity and global competitiveness of our everyday business environment necessitates the development of new computer technologies to reduce the gap between what needs to be done and what can effectively be addressed today. The wide spectrum of domains and tasks covered in this second conference on innovative applications demonstrates the role that AI can play in this challenging enterprise.

AI is in transition: While academic research continues to progress, deployed applications demonstrate the utility of this new computer technology for encoding and manipulating knowledge. Applications have become a driving force in bringing AI into the mainstream, well integrated with existing computing environments, able to solve new problems, and able to adapt to evolving real-world requirements.

Innovative applications of AI might well be a euphemism. AI is itself innovative. However, by “innovative,” we mean those applications that represent the current frontier, from a technical, economic, or application domain perspective. They show how the technology can successfully be transferred and implemented in operational environments. These applications also directly contribute to demonstrating the role of AI techniques in a wider scope of human problems, encompassing both the soft and hard sciences.

The applications selected for this book support existing economic infrastructures (as in monitoring foreign exchange transactions, assisting in

recruiting industrial personnel, or screening news stories). They also create the infrastructure elements of tomorrow (as in software validation or tunnel construction planning). It is the spectrum that can be the most significant: The individual applications are innovative, their sum even more so.

The chapters in this volume show the nature and range of real-world problems that AI technology can successfully address today. Once again, this volume of *Innovative Applications of Artificial Intelligence* constitutes a casebook of important points of reference in terms of technology, project management, design, integration, and deployment factors for anyone using AI techniques to increase productivity and competitiveness.