Cognitive Technologies

Matthew W. Crocker · Jörg Siekmann (Eds.)

Resource-Adaptive Cognitive Processes

With 148 Figures and 14 Tables

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Preface

The contributions to this volume are drawn from the interdisciplinary research carried out within the *Sonderforschungsbereich* (SFB 378), a special long-term funding scheme of the German National Science Foundation (DFG). *Sonderforschungsbereich 378* was situated at Saarland University, with colleagues from artificial intelligence, computational linguistics, computer science, philosophy, psychology – and in its final phases – cognitive neuroscience and psycholinguistics.

The funding covered a period of 12 years, which was split into four phases of 3 years each, ending in December of 2007. Every sub-period culminated in an intensive reviewing process, comprising written reports as well as on-site presentations and demonstrations to the external reviewers. We are most grateful to these reviewers for their extensive support and critical feedback; they contributed their time and labor freely to the DFG,[1] the independent and self-organized institution of German scientists. The final evaluation of the DFG reviewers judged the overall performance and the actual work with the highest possible mark, i.e. "excellent".

All contributions were written especially for this volume and summarize 12 years of research that has resulted in several hundred individual publications. They represent in our opinion the most important subset of the many individual projects and offer an overarching perspective not reflected in the individual scientific publications. Specifically, contributors sought to present their results in a summary fashion covering the main findings of this long period, while also making clear the technical and scientific contribution to the overarching theme of the volume: "resource-adaptive cognitive processes". Each paper was reviewed by an internal and external expert in the specific subject area, and finally by the two editors. We are indebted to these reviewers, who offered their time to review each of the contributions.

Finally, we are also most grateful for the intense collaboration with our colleagues over this long time span of more than a decade: Hans Engelkamp (Psychology), Ulman Lindenberger (Psychology), Kuno Lorenz (Philosophy), Axel Mecklinger (Neuroscience), Manfred Pinkal (Computational Linguistics), Gert Smolka

[1] This translates literally into "German Community of Scientists"

(Computer Science), Werner Tack (Psychology), Hans Uszkoreit (Computational Linguistics), Wolfgang Wahlster (AI), Hubert Zimmer (Psychology). Our own research areas are psycholinguistics (Matthew Crocker) and automated reasoning and AI (Jörg Siekmann).

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