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Graph Grammars and Their Application to Computer Science

5th International Workshop
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Selected Papers



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Preface

This volume consists of papers selected from the contributions presented at the Fifth International Workshop on Graph Grammars and Their Application to Computer Science that took place in Williamsburg, Virginia, November 13-18, 1994. The papers underwent an additional refereeing process to result in the 37 papers presented here (out of 78 papers presented at the workshop). The workshop was supported by EC-US Exploratory Collaborative Activity ECUS035; in particular this support has allowed many European researchers to travel to Williamsburg. The organizers of the workshop and the editors of this volume gratefully acknowledge this support. They are also indebted to NSF for providing financial support for the American organizers of the workshop.

The generic term “graph grammars” covers the whole spectrum of methods and techniques for investigating the structure of graphs and graph transformations. The motivations for and the applications of graph grammars come from very diverse areas ranging from very theoretical to very practical. These areas include pattern recognition and generation, software specification and development, data bases, massively parallel computer architectures, computer animation, developmental biology, analysis of concurrent systems, and many others. Due to such diverse applications and motivations the research in graph grammars is conducted by people with very different backgrounds.

The International Workshop on Graph Grammars and Their Application in Computer Science provides a communication forum for the graph grammar community. The workshop in Williamsburg celebrated the 25th anniversary of the publication of the two papers that initiated the whole area: one by J.L. Pfaltz and A. Rosenfeld, and one by H.J. Schneider. All three authors were present in Williamsburg, and A. Rosenfeld and H.J. Schneider gave invited talks. Also Prof. R. Siromoney gave an invited talk concerning the development of graph-grammars in India during 25 years.

The papers in this volume are grouped into 9 sections representing 9 research areas that are quite active today. The papers surely reflect current trends in graph-grammars.

We are grateful to H.-J. Kreowski who, together with the editors, served on the Program Committee for the Williamsburg Workshop. We are also indebted to all the referees of papers selected for this volume. The referees were: S. Arnborg, R. Banach, M. Bauderon, D. Blostein, F. Brandenburg, A. Corradini, B. Courcelle, J. Cuny, J. Engelfriet, G. Engels, D. Fracchia, F. Gadducci, R. Heckel, H.J. Hoogeboom, D. Janssens, W. Kahl, J.-W. Klop, H.-J. Kreowski, N. Lagergren, C. Lautemann, A. Maggiolo-Schettini, M. Nagl, F. Parisi-Presicce, G. Paun, A. Proskurowski, P. Prusinkiewicz, J.-C. Raoult, J. Rekers, L. Ribeiro, G. Rozenberg, A. Salomaa, H.J. Schneider, A. Schürr, G. Taentzer, A. Wagner, E. Wanke.

February 1996

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