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Foreword

This special issue of *Mathematical Structures in Computer Science* is devoted to the Proceedings of the International Workshop *Logic, Domains, and Programming Languages* that took place from May 24 to 27, 1995, in Darmstadt, Germany.

This workshop was organized around a particular event: the conferment of an honorary degree to Professor DANA S. SCOTT from Carnegie Mellon University at Pittsburgh. The award ceremony took place on May 24, 1995, in the presence of representatives from *Technische Hochschule Darmstadt* and participants of the workshop. Let us quote from the document handed to Dana Scott by Vice-President, Prof. Dr.-Ing. F. Eckstein:

Auf Vorschlag des Fachbereichs Mathematik verleiht die Technische Hochschule Darmstadt nach einem Beschluß des Senats vom elften Juli neunzehnhundertvierundneunzig Herrn Professor Dana S. Scott den akademischen Grad Doctor rerum naturalium honoris causa (Dr. rer. nat. h. c.) in Anerkennung seiner bahnbrechenden wissenschaftlichen Leistungen auf den Gebieten der Grundlagen der Mathematik, der Logik und der Informatik.
Sie ehrt damit einen Wissenschaftler, dessen Forschungen der Logik und der theoretischen Informatik neue Wege gewiesen und der Mathematik neue Forschungsgebiete erschlossen haben.

In his address, K. H. Hofmann from the Department of Mathematics highlighted Dana Scott's scientific achievements. He also emphasized Dana Scott's connections with Darmstadt and its university. These ties are closely related to the development of the theory of continuous lattices and, more generally, to Domain Theory. Three of the six authors (G. Gierz, K. H. Hofmann, K. Keimel, J. D. Lawson, M. Mislove and D. S. Scott) of the well-known book *A Compendium of Continuous Lattices* (Springer-Verlag 1980) are based in, or began their career in, Darmstadt. The working group on Domain Theory in Darmstadt recently expanded to a research group *Logik und mathematische Grundlagen der Informatik* within the Department of Mathematics. We believe that, in the spirit of Dana Scott's work, the mathematics community should continue to participate actively in the development of branches of mathematics that overlap with other fields of inquiry, such as computer science, and that our mathematical teaching should encourage a cross-fertilization of mathematical knowledge and techniques in todays scientific investigations.

Our workshop intended to reflect these views by offering a wide spectrum of presentations of recent scientific developments. Topics ranged from Lambda Calculus and Functional Programming, Domain Theory, Denotational and Algebraic Semantics, Type Theory and Linear Logic to Process Algebras. The invited speakers were Samson Abramsky, Olivier Danvy, Peter O'Hearn, Frank Pfenning, Gordon Plotkin, Helmut Schwichtenberg, Bent Thomsen and, last but not least, Dana Scott. More than forty contributed talks and 120 participants from all over the world made this meeting a big intellectual success. We would like to thank all participants for having made this event not only stimulating but exceptionally cooperative and congenial.

These Proceedings do not comprise the contents of this workshop as a whole. Rather, they contain a selection of original and outstanding papers presented at that meeting.

Nevertheless, we are confident that they represent important recent developments and trends in Semantics and Domain Theory. Limitations of space have forced us to postpone several accepted papers to later issues of *Mathematical Structures in Computer Science*.

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Darmstadt, October 17, 1996

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