

Gödel '96

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This volume, the 6th publication in the Lecture Notes in Logic series, collects the proceedings of the conference Logical Foundations of Mathematics, Computer Science, and Physics – Kurt Gödel's Legacy, held in Brno, Czech Republic, on the 90th anniversary of Gödel's birth. The broad range of speakers who participated in this event affirms the continuing importance of Gödel's work in logic, physics, and the philosophy and foundations of mathematics and computer science. The papers in this volume range over all these topics and contribute to our present understanding of them.

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LECTURE NOTES IN LOGIC

A Publication of The Association for Symbolic Logic

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LECTURE NOTES IN LOGIC 6

Gödel '96

Logical Foundations of Mathematics, Computer
Science and Physics – Kurt Gödel's Legacy

PETR HÁJEK

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ASSOCIATION FOR SYMBOLIC LOGIC



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Preface

The aim of the conference *Logical Foundations of Mathematics, Computer Science and Physics – Kurt Gödel's Legacy (GÖDEL'96)*, organized to the occasion of the ninetieth anniversary of the birth of Kurt Gödel, is to pay tribute to Kurt Gödel by arranging a scientific event presenting a forum for papers relevant to foundational aspects of Logic in Mathematics, Computer Science, Philosophy and Physics – areas influenced by Kurt Gödel's work.

The conference has been organized in Brno, the birthplace of Gödel, by Masaryk University Brno in co-operation with the Institute of Computer Science of the Academy of Sciences of the Czech Republic, Prague, and with the international Kurt Gödel Society based in Vienna (Organizing Committee chaired by J. Zlatuška). The Association for Symbolic Logic has recognized the conference as an ASL sponsored meeting.

The Program Committee has consisted of Z. Adamowicz, Warsaw; J. Bičák, Prague; L. Bukovský, Košice; D. de Jongh, Amsterdam; J. Grygar, Prague; E. Köhler, Vienna; J. Krajíček, Prague; P. Hájek (chair), Prague; A. Leitsch, Vienna; D. Mundici, Milano; G. Müller, Heidelberg; J. Paris, Manchester; C. Parsons, Harvard.

The Program Committee has selected the invited speakers and undertook the refereeing process. From 52 submitted papers, 14 have been selected for both presentation at the conference and publication in the Proceedings, 8 other papers have been selected only for presentation at the conference (mainly due to preliminary character of the paper). A few authors, whose papers have been accepted, decided not to publish them. Two invited authors (D. Isaacson, M. Magidor) were unable to finish their papers in time, but have remained invited speakers. It is regretted that two invited speakers (G. Kreisel and A. MacIntyre) had to decide not to attend the meeting. Nevertheless, I feel that the papers in this volume cover the domains touched by Kurt Gödel's work reasonably well and that they contribute to our understanding of the present state of knowledge in these domains.

I would like to thank to the editors of the series *Lecture Notes in Logic* for accepting this volume of Proceedings into the series in spite of the fact that it also contains papers from physics and philosophy of mathematics. The presence of these papers is clearly given by the interests of Kurt Gödel and without them the picture would be incomplete.

A financial support is very important for any conference such as this one and financial sponsorship by the following institutions is highly appreciated:

- EACSL – European Association for Computer Science Logic,
- IUHPS/DLMPS – International Union of History and Philosophy of Science / Division Logic, Methodology and Philosophy of Science,
- UNU-IIST – The United Nations University / International Institute for Software Technology,
- Hewlett-Packard s.r.o.,

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- ZPA-CZ Trutnov, Czech Republic.

The hard work of M. Daniel, D. Harmancová and A. Štědrý from the Institute of Computer Science, Academy of Sciences of the Czech Republic, in converting all the papers into a unified LaTeX shape is highly recognized.

Before closing this preface, I would like to express my anticipation that the conference will be a successful celebration of the ninetieth anniversary of the birth of Kurt Gödel, a man whose work influenced the XX century science and many of us so deeply.

Prague, May 8, 1996

Petr Hájek