

FOUNDATIONS OF THE FORMAL SCIENCES II

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Trends in Logic is a bookseries covering essentially the same area as the journal *Studia Logica* – that is, contemporary formal logic and its applications and relations to other disciplines. These include artificial intelligence, informatics, cognitive science, philosophy of science, and the philosophy of language. However, this list is not exhaustive, moreover, the range of applications, comparisons and sources of inspiration is open and evolves over time.

Volume Editor

Heinrich Wansing

The titles published in this series are listed at the end of this volume.

FOUNDATION OF THE FORMAL SCIENCES II

Applications of Mathematical
Logic in Philosophy and
Linguistics, Papers of a
Conference held in Bonn,
November 10–13, 2000

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Table of Contents

Preface	vii
List of Participants	ix
Schedule	x
The Diversity of Models in Statistical Mechanics: Views about the Structure of Scientific Theories	1
<i>Anouk Barberousse</i>	
Mathematical Logic and Natural Language: Life at the border	25
<i>Johan van Benthem</i>	
Bayesian Networks in Philosophy	39
<i>Luc Bovens and Stephan Hartmann</i>	
An Application of Circular Definitions: Rational Decision.....	47
<i>André Chapuis</i>	
Two-Dimensionalism and the Metaphysical Possibility of Zombies	55
<i>Daniel Cohnitz</i>	
Topics in Reverse Mathematics	63
<i>Mariagnese Giusto</i>	
The Logic of Intensional Predicates.....	89
<i>Leon Horsten</i>	
The So-Called Materially Valid Inferences and the Logic of Concepts.....	113
<i>Ludger Jansen and Niko Strobach</i>	
Analysis and Design from a Viewpoint of Information Flow	119
<i>Makoto Kikuchi</i>	
Features in Phonological Theory	123
<i>Marcus Kracht</i>	

New Semantics for Modal Predicate Logics	151
<i>Oliver Kutz</i>	
What is Input/Output Logic?	163
<i>David Makinson and Leendert van der Torre</i>	
The Gupta-Belnap Fixed-Point Problem and the Theory of Clones of Functions	175
<i>José Martínez Fernández</i>	
Situated Reasoning in Time about Time	185
<i>Alice G.B. ter Meulen</i>	
Generic Ontology of Linguistic Classification	203
<i>Rainer Osswald</i>	
Techniques and Methods of Science from a Structuralist Point of View	213
<i>Martin Rotter</i>	
Proof Theory and Formal Grammars: Applications of Normalization	235
<i>Hans-Jörg Tiede</i>	
World Travelling and Mood Swings	257
<i>Kai Frederick Wehmeier</i>	
Synchrony and Composition: Toward a Cognitive Architecture be- tween Classicism and Connectionism	261
<i>Markus Werning</i>	
References	279

Preface

The conference **Foundations of the Formal Sciences II: Applications of Mathematical Logic to Philosophy and Linguistics** was the second part of the conference series **Foundations of the Formal Sciences**. Our conference series focuses on the interdisciplinary aspects of the foundational parts of the Formal Sciences and invites mainly young researchers to present their work in detail to an interdisciplinary audience.¹ The conference series started with a general conference **Foundations of the Formal Sciences I** in Berlin (May 1999) and will be continued with meetings in Vienna (September 2001) on “Complexity in Mathematics and Computer Science” and again Bonn (February 2003) on “The History of the Concept of the Formal Sciences”. The most recent information about the conference series can be found on our webpage

<http://www.math.uni-bonn.de/people/fotfs/>.

This meeting in Bonn in the year 2000 was dedicated to the applications of formal methods in subjects more closely related to the Arts (as opposed to the Sciences): The uses of formal methods both in philosophy (mainly in philosophy of science, language and mathematics) and linguistics are multifarious, and the number and the level of intricacy of interconnections between seemingly unrelated areas is particularly high in this field.

We believe that our conference and this proceedings volume give a clear testimony of this fact: We have papers on structuralist methods in the philosophy of science, on semantics and formal languages and their use in linguistics, and on several aspects of intensional semantics, connected to Kripke style modal logic or Gupta-Belnap style revision theory.

The reader can find a list of participants and a schedule of the conference on pages ix and x.

We hope that this proceeding volume will be as helpful to those reading it as the talks were for us participants at the conference. And, of course, we hope that the conference series continues to be as successful as this second conference of the series was, when we reconvene in Vienna in September 2001 for the third conference of the series.

¹ In [Löw∞], the author presents a brief discussion of the scope of this conference series. He subsumes non-exclusively the subjects mathematics, theoretical philosophy, theoretical computer science and formal linguistics under the heading of the conference series.

We would like to thank all speakers at the conference for contribution to the success of the conference. In addition to that, we would like to thank all people involved in the organization of the conference; first of all, the two additional members of the Organizing Committee, Peter Koepke of the *Mathematisches Institut* and Rainer Stuhlmann-Laeisz of the *Lehr- und Forschungsbereich III des Philosophischen Seminars*. This conference was a joint event of these two departments and faculty, staff and students of the two departments joined to organize this conference.

We would like to thank all helpers at this conference and name them in alphabetic order: Stefan Bold, Patrick Braselmann, Dipl.-Math. Manfred Burghardt, Lic. Marc van Eijmeren, Matthias Enders, Tanja Hötte, Dipl.-Math. Martin Koerwien, our secretary Sabine Lange, Dipl.-Math. Philipp Rohde, Birgit Schuster, Matthias Thurn from the computer support, and Thomas Waltke.

The conference was mainly funded by the *Deutsche Forschungsgemeinschaft* (Grant Number 4851/293/00). During the preparation of the proceedings volume we received the support of Heinrich Wansing (Dresden) and Tamara Welschot of *Kluwer Academic Publishers*. The L^AT_EX-classfile `fotfs.cls` which was used for the layout of this volume is due to Dipl.-Math. Philipp Rohde.

Last but not least, we have to thank the numerous referees who helped us a lot to produce this volume within nine months after the conference by adhering to our strict deadlines and producing illuminating and competent reports.

Bonn, August 2001

B.L. W.M. Th.R.

After submitting the volume to *Kluwer Academic Publishers* in September 2001, we received a helpful referee report on the entire volume for which we are thankful. We also thank Charles Erkelens who was in charge of the book series **Trends in Logic** (after a restructuring at Kluwer's) and took Tamara Welschot's part of being our contact in Dordrecht.

During the final proofreading phase, Dipl.-Math. Stefan Bold helped us with his bibliographical, layouting and technical skills for which we thank him very much.

Bonn, July 2002

B.L. Th.R.

List of Participants

Mark van Atten (Utrecht)	Alexandru Baltag (Amsterdam)
Anouk Barberousse (Paris)	Johan van Benthem (Amsterdam)
Stefan Bold (Bonn)	Patrick Braselmann (Bonn)
Manfred Burghardt (Bonn)	H.J. Burscheidt (Köln)
André Chapuis (Bloomington IN)	Daniel Cohnitz (Düsseldorf)
Marc van Eijmeren (Bonn)	F. Ehlert (Bonn)
Matthias Enders (Bonn)	Gudrun Fankhaenel (Bonn)
Mariagnese Giusto (Torino)	Volker Halbach (Konstanz)
Stephan Hartmann (Konstanz)	Martin Hils (Bonn)
Wolfram Hinzen (Regensburg)	Walter Hoering (Tübingen)
Leon Horsten (Leuven)	Tanja Hötte (Bonn)
Ludger Jansen (Münster)	Makoto Kikuchi (Kobe)
Peter Koepke (Bonn)	Martin Koerwien (Bonn)
Marcus Kracht (Berlin)	Kai-Uwe Kühnberger (Tübingen)
Oliver Kutz (Leipzig)	Benedikt Löwe (Bonn)
Wolfgang Malzkorn (Bonn)	José Martínez Fernández (Valencia)
Ulrich Missberger (Mainz)	Alice G.B. ter Meulen (Groningen)
Jean-Yves Morin (Montreal QC)	Albert Newen (Bonn)
Miriam Ossa (Bonn)	Rainer Osswald (Hagen)
Martin Pape (Potsdam)	Mario Piazza (Roma)
Thoralf Räsch (Potsdam)	Aike Reyer (Stuttgart)
Andrei Rodin (Kaliningrad)	Philipp Rohde (Bonn)
Martin Rotter (Köln)	Daniel Schoch (Saarbrücken)
Bernhard Schröder (Bonn)	Katrin Schulz (Stuttgart)
Birgit Schuster (Bonn)	Horst Stuve (Köln)
Rainer Stuhlmann-Laeisz (Bonn)	Hans-Jörg Tiede (Bloomington IL)
Leon van der Torre (Amsterdam)	Catherine Hall Uttenthal (København)
Thomas Waltke (Bonn)	Kai Wehmeier (Leiden)
Philip D. Welch (Wien)	Markus Werning (Erfurt)
Tina Wiecezorek (Berlin)	Roger A. Young (Dundee)

Schedule

Time	Friday, Nov 10th	Saturday, Nov 11th	Sunday, Nov 12th	Monday, Nov 13th
09:00		Kracht	Piazza	van der Torre
09:30				
10:00		Hinzen	van Atten	Kutz
10:30		<i>BREAK</i>	<i>BREAK</i>	Wehmeier
11:00		Jansen	Hoering	<i>BREAK</i>
11:30		Werning	Giusto	Halbach
12:00		Osswald		Baltag
12:30		<i>LUNCH BREAK</i>	<i>LUNCH BREAK</i>	<i>CLOSING</i>
13:00				
13:30		<i>OPENING</i>		
14:00		Horsten	van Benthem	Rotter
14:30				
15:00		Chapuis	ter Meulen	Hartmann
15:30	<i>BREAK</i>	Cohnitz		
16:00	Martinez	<i>BREAK</i>	<i>BREAK</i>	
16:30	Welch	Tiede	Young	
17:00			Reznikov*	
17:30	Kühnberger		Rodin	
18:00			<i>BREAK</i>	
18:30		Schoch		
19:00		Kikuchi		
19:30		Barberousse		
20:00				

* Reznikov's lecture had to be cancelled due to a cancelled flight.