

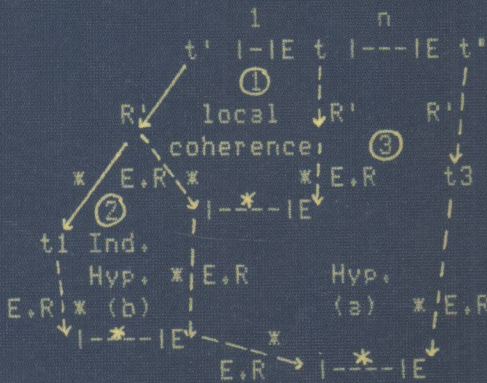
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Rewriting, Computation and Proof

Essays Dedicated to Jean-Pierre Jouannaud
on the Occasion of His 60th Birthday



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Volume Editors

Hubert Comon-Lundh

Ecole Normale Supérieure de Cachan

Laboratoire Spécification et Vérification

CNRS UMR 8643, 61, avenue du Président Wilson, 94235 Cachan Cedex, France

E-mail: comon@lsv.ens-cachan.fr

Claude Kirchner

INRIA & LORIA

615, rue du Jardin Botanique, 54602 Villers-lès-Nancy Cedex, France

E-mail: Claude.Kirchner@inria.fr

Hélène Kirchner

CNRS & INRIA, LORIA

Campus Scientifique, BP 239, 54506 Vandœuvre-lès-Nancy, France

E-mail: Helene.Kirchner@loria.fr

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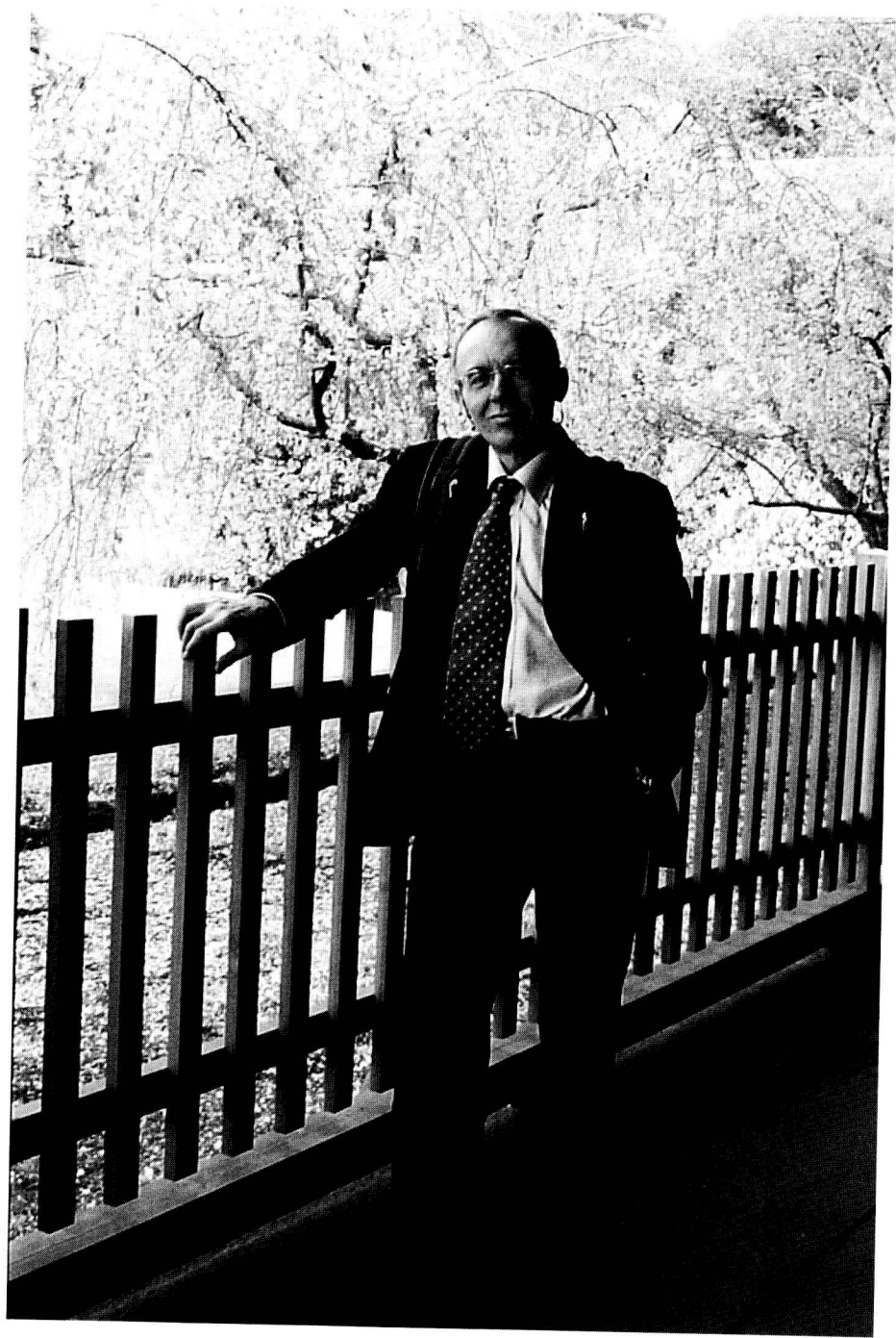
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Preface

This volume is dedicated to Jean-Pierre Jouannaud on his 60th birthday. It contains refereed contributions by leading researchers in the different areas spanned by Jean-Pierre Jouannaud's work. These papers were presented at the symposium held in Cachan near Paris, on June 21–22, 2007, in Jean-Pierre Jouannaud's honor.

Jean-Pierre has deeply influenced, and is still influencing, research in Informatics, through the many important results he has produced in various research fields, through the generations of scholars he has educated, and through the role he has played in helping the Informatics discipline to reach maturity and its place among the other disciplines.

Jean-Pierre's Origins and Contributions

Jean-Pierre defended his first thesis in 1972 on “Filtres digitaux autoadaptifs : algorithmes de calcul et simulation”. Together with the emergence of Informatics, he then moved to more symbolic topics and, as assistant professor at the university of Paris 6 in Jussieu, he defended his “thèse d'état” in 1977 entitled “Sur l'inférence et la synthèse automatiques de fonctions LISP à partir d'exemples”. This led him to investigate the foundational concepts emerging at that time: lambda-calculus and rewriting.

Jean-Pierre then played a leading role in rewriting and its technology: he introduced this field in Nancy, when he took up an Associate Professor position in 1979, and founded there, together with Pierre Lescanne, the *Eureca* team that got the CNRS silver medal in 1986. He was also at the origin of the RTA (Rewriting Techniques and Applications) conference series in 1985. In this domain Jean-Pierre's major contributions spanned to unification, rewriting and completion modulo, conditional rewriting, termination proofs, modular properties, and automated proofs by induction in rewrite theories.

During his one year sabbatical at SRI International in 1984–85, Jean-Pierre Jouannaud developed further his strong interest for algebraic specification languages and their efficient implementation. He contributed with Kokichi Futatsugi, Joseph Goguen and José Meseguer to the design, semantics and implementation of OBJ2. Further important contributions of Jean-Pierre Jouannaud concern order-sorted algebras and more recently membership equational logic, an essential feature of the *Maude* system.

In 1985, Jean-Pierre moved to the university of Paris Sud in Orsay, where he became full professor in 1986. There he founded the *Demons* team, which focused on automated deduction and constraint solving. Then, with interactions in particular with Gérard Huet, his interests widened to higher-order rewriting and the calculus of constructions. He contributed to strong results on the in-

tegration of rewriting and deduction leading to the design of proof assistants with rewriting as a first-class concept. His results on termination of higher-order rewriting are also leading the way.

In recognition of these outstanding scientific achievements, he was awarded the “Prix Montpetit” from the French Academy of Sciences in 2000.

Jean-Pierre started several international collaborations and forged scientific links and friendships, which continue over the years, in particular in the USA, Canada, Argentina, Spain, Japan and Taiwan. The outcomes were formal joint research projects (especially through NSF grants and European working groups), general collaboration agreements, such as the French-Taiwanese collaboration, which has been awarded a “Grand Prix” from the French Academy of Science, or simply intensive visits both ways.

To promote and animate the theoretical computer science community has been and remains one of his concerns. He was a member of the CNU (National University Council), a member of the CNRS national committee, and he is heading with great success the computer science laboratory at Ecole Polytechnique.

Jean-Pierre has exceptional qualities as a research team manager and as a supervisor of students. His work with his students has always involved a close, friendly relationship, a daily meeting, weekly encouragements, monthly entertainment and a close care of the future of the students. One of the keys of Jean-Pierre Jouannaud as a research team manager is his motto: “enjoy!”. Enjoy everything that is good, which includes working together on research problems, and also drinking good wine, eating good food, skiing, climbing, wind-surfing, . . . The best being to combine several of these activities. Having fun working together, it is easy to spend hours on a problem, to launch new projects, to arouse enthusiasm among students.

Jean-Pierre Jouannaud’s Doctoral Descendants

Jean-Pierre is an excellent teacher. He not only knows how to motivate work on difficult and rich concepts, but he has also a profound understanding of their deep properties and relationships. He loves to communicate his knowledge, know-how and real enthusiasm. He has lectured generations of students and liked to be involved in doctoral teaching. His ideas and practice have strongly influenced many PhD students.

The following table summarizes his doctoral descendants. We have tried to be as exhaustive as possible, and we did not take into account the many students that will defend after 2007. A few persons appear several time, as they have been supervised by two people.

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