

PROCEEDINGS OF THE
2007 WORKSHOP ON
SCHEME AND FUNCTIONAL PROGRAMMING

EDITOR:

DANNY DUBÉ

TECHNICAL REPORT

DIUL-RT-0701

**DÉPARTEMENT D'INFORMATIQUE ET DE GÉNIE LOGICIEL
FACULTÉ DES SCIENCES ET DE GÉNIE**

Pavillon Adrien-Pouliot
Université Laval
Québec (QC), Canada
G1K 7P4

SEPTEMBRE 2007

Preface

This report contains the papers presented at the eighth Workshop on Scheme and Functional Programming, held on Sunday, September 30, 2007 in Freiburg, Germany, affiliated with the 2007 International Conference on Functional Programming (ICFP).

In response to the call for papers, eighteen papers were submitted. The discussions of the program committee were held in a virtual meeting. Fourteen papers were accepted. One of these was later withdrawn by its authors. Certain papers were presented as talks and others, as posters. We would like to thank the external reviewers Robby Findler (University of Chicago), Holger Gast (University of Tübingen), Oleg Kiselyov (FNMOC), Eric Knauer (University of Tübingen), Jacob Matthews (University of Chicago), and Michael Sperber (DeinProgramm) for their gracious help.

We also want to thank the members of the steering committee for their advice, especially Robby Findler who, as last year's workshop organizer and program chair, had to answer so many questions. We also thank the ICFP general chair, Ralf Hinze, the workshop co-chairs, Graham Hutton and Matthias Blume, the local arrangements chair, Peter Thiemann, the local organizer Markus Degen, and the ACM for sponsoring the workshop and handling registrations and arrangements at the workshop site.

Danny Dubé
Laval University
Organizer and Program Chairman
for the program committee

Program Committee

John Clements (Cal Poly)	Aubrey Jaffer (ClearMethods Inc.)
Danny Dubé (Laval University)	Christian Queinnec (University Paris 6)
Martin Gasbichler (Zühlke Engineering)	Chung-chieh Shan (Rutgers University)

Steering Committee

William D. Clinger (Northeastern University)	Christian Queinnec (University Paris 6)
Marc Feeley (University of Montréal)	Manuel Serrano (INRIA Sophia Antipolis)
Robby Findler (University of Chicago)	Olin Shivers (Northeastern University)
Dan Friedman (Indiana University)	Mitchell Wand (Northeastern University)

Schedule and Table of Contents

9:00am	WELCOME	
9:10am	TECHNICAL SESSION I	
	Chairman: Marc Feeley (Université de Montréal)	
	Advanced Macrology and the Implementation of Typed Scheme	1
	Ryan Culpepper, Sam Tobin-Hochstadt (Northeastern University), and Matthew Flatt (University of Utah)	
	Well-typed Programs Can't Be Blamed	15
	Philip Wadler (University of Edinburgh) and Robert Bruce Findler (University of Chicago)	
10:00am	<i>Break</i>	
10:30am	TECHNICAL SESSION II	
	Chairman: John Clements (Cal Poly)	
	Generation-Friendly Eq Hash Tables	27
	Abdulaziz Ghuloum and R. Kent Dybvig (Indiana University)	
	Exceptional Continuations in JavaScript	37
	Florian Loitsch (INRIA Sophia Antipolis)	
	Software Transactions Meet First-Class Continuations	47
	Aaron Kimball and Dan Grossman (University of Washington)	
	Towards a Portable and Mobile Scheme Interpreter	59
	Adrien Piérard (Université Paris 6) and Marc Feeley (Université de Montréal)	
	Applications of Fold to XML Transformation	69
	Andy Wingo	
12:30pm	<i>Lunch</i>	
2:00pm	TECHNICAL SESSION III	
	αKanren — A Fresh Name in Nominal Logic Programming	79
	William E. Byrd and Daniel P. Friedman (Indiana University)	
	An Executable Rewriting Logic Semantics of K-Scheme	91
	Patrick Meredith, Mark Hills, and Grigore Roşu (University of Illinois Urbana-Champaign)	
	Toward Abstract Profiling	105
	Nguyen-Minh Bui (Université Laval)	
	Deriving a Comprehensive Document from a Concise Document — Document Engineering in Scheme	117
	Kurt Nørmark (Aalborg University)	
	Gannet: a Scheme for Task-level Reconfiguration of Service-based Systems-on-Chip	129
	Wim Vanderbauwhede (University of Glasgow)	
	Implementing Language-Dependent Lexicographic Orders in Scheme	139
	Jean-Michel Hufflen (University of Franche-Comté)	
3:30pm	<i>Break</i>	
4:00pm	DISCUSSION ON R6RS	
	Chairman: Mitchell Wand (Northeastern University)	

