# Well-Quasiorders in Computer Science

# 17-22 January 2016

### Schloss Dagstuhl

# Monday: 18 January 2016

9:00-9:10	Opening
9:15 - 9:45	Chair: Dick De Jongh Diana Schmidt: Ordinal notations, the maximal order types of Kruskal's Tree
	Theorems, and a tale of two cultures.
9:55-10:15 10:15	Andreas Weiermann: Some challenges related to wqo's Coffee
	Chair: Helmut Schwichtenberg
10:45-11:15	Lev Gordeev: On Harvey Friedman's Finite Phase Transitions
11:15-12:00 12:15	Dominique Larchey-Wendling: An axiom free Coq proof of Kruskal's tree theorem Lunch
	Chair: Jean Goubault-Larrecq
14:00-14:45	Philippe Schnoebelen: Well-quasi-orderings for program analysis and computation complexity
14:45 - 15:15	Alain Finkel: Basics on (infinitely branching) WSTS
15:15-15:45	Mirna Dzamonja: On the width of FAC orders
15:45	Coffee and Cake
	Chair: Andreas Weiermann
16:45-17:15	Christian Sternagel: A Mechanized Proof of Higman's Lemma by Open
1715 1750	Induction (in Isabelle/HOL)
17:15–17:50 18:00	Helmut Schwichtenberg: Higman's Lemma and its computational content Dinner

#### Tuesday: 19 January 2016

9:00-9:40 9:45-10:10 10:15-10:45	Chair: Thomas Forster Yann Pequignot: From well to better: the space of ideals Raphael Carroy: Ordering Functions Coffee
10:45 - 11:25 11:30 - 12:00 12:15	Chair: Lev Beklemishev Alberto Marcone: Wqo and Bqo in Reverse Mathematics Maurice Pouzet: Problems on well quasi ordering Lunch
14:00–14:30: 14:30–15:20: 15:30	Chair: Monika Seisenberger Chun-Hung Liu: Robertson's conjecture on well-quasi-ordering and topological minors. Michael Rathjen: Bounds of the strength of the Graph Minor Theorem? Break
16:30-17:10 17:15-17:40	Chair: Peter Hertling Victor Selivanov: Well quasi-orders and descriptive set theory: some results and questions Thomas Forster: Better Quasi Orders and where they come from

#### Wednesday: 20 January 2016

	Chair: Victor Selivanov
9:00 - 9:25	Jean Goubault-Larrecq: Noetherian spaces
9:30 - 9:55	Matthew de Brecht: Noetherian spaces and quantifier elimination
10:00 - 10:20	Arno Pauly: Noetherian spaces in TTE
10:20	Coffee
11:00 - 11:30 11:30 - 12:00 12:15	Chair: Klaus Weihrauch Oleg Kudinov: Definability in some well partial orders Bill Wadge: Games and Logic Programs Lunch
13:15	Start Excursion – Walk

#### Thursday: 21 January 2016

	Chair: Christian Glasser
9:00-9:45	Mizuhito Ogawa :Well-structured pushdown systems
9:45 - 10:15	Willem Fouche
10:15	Coffee
	Chair: Alberto Marcone
10:45 - 11:10	Peter Schuster: Linearisation as Conservation
11:15-12:35	Julia Knight: Well quasi-orderings and Hahn Fields
11:40-12:05	Andreas Blass: A question about unique bad arrays
12:15	Lunch
15:30	Coffee
	Chair: Philippe Schnoebelin
16:30 - 17:00	Silvain Schmitz: Complexity Classes beyond Elementary
17:00 - 17:30	Roland Meyer: Dimensions of Mobility
17:30 - 18:00	Problem Session

#### Friday: 22 January 2016

	Chair: Diana Schmidt
9:00 - 9:30	Dick de Jongh: Some uses of wqo's and bqo's in modal logic
9:30-10:00	Thomas Powell: The computational content of open induction
10:00	Coffee
	Chair: Dieter Spreen
10:30-11:00	Simon Halfon: Universality and VASS
11:00-11:30	Peter Hertling: On Initial Segments of Topological Weihrauch Degrees
11:30-12:00	Solutions to the Problems
12:00	Closing
	-
12:15	Lunch