

# Workshop Program, IWPEC 2009

## Thursday, September 10, 2009

### 9:00 – 9:50. WAOA Invited Talk.

*Combinatorial Algorithms for Convex Programs Capturing Market Equilibria and Nash Bargaining Solutions*  
V. Vazirani

### 10:00 – 11:15. IWPEC Session 1 (Session Chair: H. Fernau).

*On Digraph Width Measures in Parameterized Algorithmics*

R. Ganian, P. Hlineny, J. Kneis, A. Langer, J. Obdržálek, and P. Rossmanith

*Well-Quasi-Ordering Bounded Treewidth Graphs*

M. Fellows, D. Hermelin, and F. A. Rosamond

*Polynomial Kernels and Faster Algorithms for the Dominating Set Problem on Graphs with an Excluded Minor*

S. Gutner

### 11:40 – 12:55. IWPEC Session 2 (Session Chair: I. Razgon).

*Partitioning into Sets of Bounded Cardinality*

M. Koivisto

*Even Faster Algorithm for Set Splitting!*

D. Lokshtanov and S. Saurabh

*What Makes Equitable Connected Partition Easy*

R. Enciso, M. Fellows, J. Guo, I. Kanj, F. Rosamond, and O. Suchý

### 14:00 – 14:50. WAOA Invited Talk

*Algorithm Engineering for Route Planning in Realistic Scenarios*

D. Wagner

### 15:00 – 16:15. IWPEC Session 3 (Session Chair: T. Husfeldt).

*An exact algorithm for the Maximum Leaf Spanning Tree problem*

D. Raible, H. Fernau, J. Kneis, D. Kratsch, A. Langer, P. Rossmanith, and M. Liedloff

*On finding directed trees with many leaves*

J. Daligault and S. Thomasse

*On the Directed Degree-Preserving Spanning Tree Problem*

S. Sikdar, D. Lokshtanov, V. Raman, and S. Saurabh

### 16:35 – 18:15. IWPEC Session 4 (Session Chair: J. Buss).

*Boolean-width of graphs*

J. A. Telle, B.-M. Bui-Xuan and M. Vatshelle

*Paths of Bounded Length and Their Cuts: Parameterized Complexity and Algorithms*

P. Golovach and D. Thilikos

*Bounded-Degree Techniques Accelerate Some Parameterized Graph Algorithms*

P. Damaschke

*Improved induced matchings in sparse graphs*

L. Kowalik, T. Walen, M. Krnc, and R. Erman

## Friday, September 11, 2009

### 9:00 – 9:50. IWPEC Invited Talk (Session Chair: J. Chen).

*Kernelization: new upper and lower bound techniques*

H. Bodlaender

### 10:00 – 11:15. IWPEC Session 5 (Session Chair: S. Saurabh).

*Computing pathwidth faster than  $2^n$*

K. Suchan and Y. Villanger

*The complexity of satisfiability of small depth circuits*

C. Calabro, R. Impagliazzo, and R. Paturi

*An Exponential Time 2-Approximation Algorithm for Bandwidth*

M. Furer, S. Gaspers, and S. Kasviswanathan

### 11:40 – 12:55. IWPEC Session 6 (Session Chair: G. Gutin).

*Planar Capacitated Dominating Set is  $W[1]$ -hard*

H. L. Bodlaender, D. Lokshtanov, and E. Penninkx

*Two Edge Modification Problems Without Polynomial Kernels*

S. Kratsch and M. Wahlström

*The parameterized complexity of some geometric problems in unbounded dimension*

P. Giannopoulos, C. Knauer, and G. Rote

### 14:00 – 14:50. IWPEC Invited Talk (Session Chair: F. Fomin).

*Color coding, balanced hashing and approximate counting*

N. Alon

### 15:00 – 16:15. IWPEC Session 7 (Session Chair: H. Bodlaender).

*Probabilistic Approach to Problems Parameterized Above Tight Lower Bound*

G. Gutin, E. J. Kim, S. Szeider, and A. Yeo

*Pareto Complexity of Two-Parameter FPT Problems: A Case Study for Partial Vertex Cover*

P. Damaschke

*Stable Assignment with Couples: Parameterized Complexity and Local Search*

D. Marx and I. Schlotter

### 16:35 – 17:50. IWPEC Session 8 (Session Chair: S. Szeider).

*Improved Parameterized Algorithms for the Kemeny Aggregation Problem*

N. Simjour

*FPT Algorithms in Analysis of Heuristics for Extracting Networks in Linear Programs*

G. Gutin, D. Karapetyan, and I. Razgon

*A faster fixed-parameter approach to drawing binary tanglegrams*

S. Böcker, F. Hüffner, A. Truss, and M. Wahlström