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20th International Conference and Workshops on Algorithms and Computation

<https://mozart.diei.unipg.it/walcom2026>

WALCOM 2026 Program

March 4–6, 2026
Perugia, Italy

Tuesday, March 3, 2026

18:30-20:30 Welcome Reception (*Bar Pasticceria dell'Accademia*)

Wednesday, March 4, 2026

8:50-9:00 Opening

9:00-10:00 **Session 1: Games and voting – Chair: L. Grilli**

09:00-09:20 Complexity and algorithms for Arc-Kayles and Non-Disconnecting Arc-Kayles
K. Burke, A. Dailly, N. Oijid

09:20-09:40 Can One Flip Spoil It All?
P. Arora, P. Dey, N. Misra

09:40-10:00 Computing Power Indices in Weighted Majority Games with
N. Kakimura and Y. Terai

10:00-10:30 Coffee Break

10:30-12:10 **Session 2: Graph drawings and embeddings – Chair: C. Binucci**

10:30-10:50 Computing Beyond-Planar Crossing Numbers via Forbidden
M. Chimani, M.H. Wagner

10:50-11:10 Minimum-Weight Outerplane Laman Graphs
O. Aichholzer, Y. Higashikawa, J. Orthaber, D. Perz, B. Vogtenhuber, A. Weinberger

11:10-11:30 Minimizing Vertical Length in Linked Bar Charts
S. van den Broek, M. van Kreveld, W. Meulemans, A. Simons

11:30-11:50 On Compaction and Realizability of Almost Convex Octilinear Representations
H. Förster, G. Ortali, L. Schlipf

11:50-12:10 Hardness and Parameterized Tractability of the Weak Graph Distance
M. Buchin, W. Kijßler, F. Kubon

12:10-14:00 Lunch Break

14:00-15:00 **Session 3: Invited talk – Chair: G. Liotta**

14:00-15:00 Data Compression and Indexing in the era of Machine Learning
P. Ferragina

15:00-15:10 Short Break

15:10-15:50 **Session 4: Graph reconfiguration – Chair: T. Saitoh**

15:10-15:30 How to Reconfigure Your Alliances
H. Fernau, K. Mann

15:30-15:50 Graph Irregularity via Edge Deletions
J. Bensmail, N. Catherinot, F. Fioravantes, C. Marcille, N. Oijid

15:50-16:20 Coffee Break

16:20-17:40 **Session 5: Induced subgraphs and dominating sets – Chair: M. Saghafian**

16:20-16:40 Finding Order-Preserving Subgraphs
H. Imamura, Y. Kobayashi, Y. Otachi, T. Saitoh, K. Sato, A. Takaoka, R. Yoshinaka, T. van der Zanden

16:40-17:00 Finding a Maximum Common (Induced) Subgraph: Structural Parameters Revisited
T. Hanaka, Y. Okada, Y. Otachi, L. Volk

17:00-17:20 Large Induced Subgraphs of Bounded Degree in Outerplanar and
M. D'Elia, F. Frati

17:20-17:40 Complexity of perfect (1,2)-dominating sets in low-degree graphs
J. Kratochvíl, U. Bednarz, A. Michalski

17:45-18:45 Business Meeting

Thursday, March 5, 2026

09:00-10:00 **Session 6: Invited Talk – Chair: W. Didimo**

09:00-10:00 Graph Similarity: Concepts, Methods, and Challenges
P. Mutzel

10:00-10:30 Coffee Break

10:30-10:35 In Memoriam Prof. Hsu-Chun Yen

10:35-12:15 **Session 7: Shortest paths and minimum spanning trees – Chair: D. Perz**

10:35-10:55 Forcing a unique minimum spanning tree and a unique shortest path
T. Gima, Y. Kobayashi, Y. Otachi, T. Sato

10:55-11:15 On the MST-ratio: Theoretical Bounds and Complexity of Finding the Maximum
A.J. Ameli, F. Motiej, M. Saghafian

11:15-11:35 Disjoint Tours and the Price of Diversity
A. López Martínez, M. de Berg, F. Spieksma

11:35-11:55 Shortcutting the diameter of a polygon
T. Eom, T. Ahn, M. Song, H.-K. Ahn

11:55-12:15 Parameterized Complexity of Reconfiguring Vertex-Disjoint Shortest Paths
R. Saito, T. Ito

12:15-14:00 Lunch Break

14:00-15:40 **Session 8: Approximation – Chair: F. Grosso**

14:00-14:20 Hardness and Approximation Results for Extending Unique
S. Habib, D. Mondal, S. Sharmin, M.S. Rahman

14:20-14:40 Approximating the Average-case Graph Search Problem with Non-
M. Szyfelbein

14:40-15:00 Linear time small coresets for k-mean clustering of segments with
D. Denisov, S. Dolev, D. Felmdan, M. Segal

15:00-15:20 Cartesian Forest Matching
B. Auvray, J. David, R. Groult, T. Lecroq

15:20-15:40 Streaming algorithms for products of probabilities
M. Lohrey, L. Rische, L. Seelbach Benkner, J. Xochitemol

16:00-19:00 Excursion

19:30-21:30 Social Dinner (*Ristorante del Sole*)

Friday, March 6, 2026

09:00-10:00 **Session 9: Invited Talk – Chair: D. Mondal**

09:00-10:00 Sparsification and kernelization for constraint satisfaction problems through the lens of non-redundancy
B. Jansen

10:00-10:30 Coffee Break

10:30-12:10 **Session 10: Complexity – Chair: F. Montecchiani**

10:30-10:50 A Complexity Analysis of the c-Closed Vertex Deletion Problem
L. Lehner, C. Komusiewicz, L.P. Staus

10:50-11:10 On the Computational Complexity of Covering Multi-Interface
C. Bazgan, M. Chopin, A. Nichterlein, C. Richer

11:10-11:30 Generalizing Brooks' Theorem via Partial Coloring is Hard
J. Bok, A. Das, A. Gujgiczer, N. Jedličková

11:30-11:50 Space Efficient algorithms for parameterised problems
S.S. Akhtar, P. Misra, G. Philip

11:50-12:10 Subexponential and Parameterized Mixing Times of Glauber
M. Marin

12:10-14:00 Lunch Break

14:00-15:40 **Session 11: Geometric problems – Chair: E. Di Giacomo**

Session sponsored by Tom Sawyer Software

14:00-14:20 Further Results on Rendering Geometric Intersection Graphs
N. Honorato-Droguett, K. Kurita, T. Hanaka, H. Ono, A. Wolff

14:20-14:40 Fundamentals of Computing Continuous Dynamic Time Warping in 2D under Different Norms
K. Buchin, M. Buchin, J.E. Swiadek, S. Wong

14:40-15:00 The Gate-Cover Problem
A. Rosenberg, E. Arkin, A. Efrat, O. Filtser, S. Kobourov, J. Kratochvíl, J. Mitchell

15:00-15:20 Trajectory Visibility at First Sight
S.M.H. Kazemi, M.A. Abam, M. Ghodsi

15:20-15:40 Tile Reconfiguration by a Finite Automaton
J. Friemel, D. Liedtke, C. Scheffer

15:40-16:10 Coffee Break

16:10-17:30 **Session 5: Enumeration problems – Chair: A. Tappini**

16:10-16:30 Enumerating All Graph Colorings Using Zero-Suppressed Binary Decision Diagrams
R. Okuda, S.-I. Minato, J. Kawahara

16:30-16:50 Engineering Algorithms for L-Isolated Maximal Clique Enumeration
M. D'Elia, I. Finocchi, M. Patrignani

16:50-17:10 On the Complexity of Hyperpath and Minimal Separator Enumeration in Directed Hypergraphs
K. Kurita, K. Mann

17:10-17:30 Enumeration of Bases in Matroid with Exponentially Large Ground Set
Y. Nishimura, K. Harauchi

17:30-17:45 Closing