

# CIAC 2010 – Conference Program

\*\*\* May 26 \*\*\*

— 9.00 – 9.30: Opening —

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**9.30 – 10.30: Invited Talk by Giuseppe F. Italiano**

introduced by Rossella Petreschi

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— 10.30 – 10.50: Coffee Break —

**Session:** Graph Algorithms I

chair: Vangelis Paschos

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**10.50 – 11.15:** Faisal N. Abu-Khzam, Amer E. Mouawad, and Mathieu Liedloff. *An Exact Algorithm for Connected Red-Blue Dominating Set*

**11.15 – 11.40:** Martin Olsen. *Maximizing PageRank with new Backlinks*

**11.40 – 12.05:** Bingbing Zhuang and Hiroshi Nagamochi. *Enumerating Rooted Graphs with Reflectional Block Structures*

**12.05 – 12.30:** Hans-Joachim Böckenhauer, Ralf Klasing, Tobias Mömke, and Monika Steinová. *Improved Approximations for TSP with Simple Precedence Constraints*

**12.30 – 12.55:** Johan M. M. van Rooij. *Polynomial Space Algorithms for Counting Dominating Sets and the Domatic Number*

— 12.55 – 14.15: Lunch —

**Session:** Computational Complexity

chair: Nicola Galesi

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**14.15 – 14.40:** Leizhen Cai and Boting Yang. *Parameterized Complexity of Even/Odd Subgraph Problems*

**14.40 – 15.05:** Péter Biró, Robert W. Irving, and David F. Manlove. *Popular matchings in the Marriage and Roommates problems*

**15.05 – 15.30:** Ching-Lueh Chang and Yuh-Dauh Lyuu. *Bounding the number of tolerable faults in majority-based systems*

**15.30 – 15.55:** Pinar Heggernes, Federico Mancini, Jesper Nederlof, and Yngve Villanger. *A parameterized algorithm for Chordal Sandwich*

**15.55 – 16.20:** Dana Ron and Gilad Tsur. *Testing computability by width-2 OBDDs where the variable order is unknown*

— **16.20 – 16.40:** Coffee Break —

**Session:** Graph Coloring & Game Theory    chair: Dieter Mitsche

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**16.40 – 17.05:** Panagiotis Cheilaris and Géza Tóth. *Graph unique-maximum and conflict-free colorings*

**17.05 – 17.30:** Bruno Escoffier, Laurent Gourvès, and Jérôme Monnot. *Strategic Coloring of a Graph*

**17.30 – 17.55:** Rahul Tripathi, Elena Valkanova, and V. S. Anil Kumar. *On Strategy Improvement Algorithms for Simple Stochastic Games*

**17.55 – 18.20:** Janina Brenner and Guido Schäfer. *Online Cooperative Cost Sharing*

**\*\*\* May 27 \*\*\***

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**9.30 – 10.30: Invited Talk by Ricardo Baeza-Yates**

introduced by Giorgio Ausiello

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— **10.30 – 10.50:** Coffee Break —

**Session:** Tree Algorithms & Tree Decompositions

chair: Peter Widmayer

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**10.50 – 11.15:** Reinhard Pichler, Stefan Rümmele, and Stefan Woltran. *Multicut Algorithms via Tree Decompositions*

**11.15 – 11.40:** Hans-Joachim Böckenhauer, Karin Freiermuth, Juraj Hromkovič, Tobias Mömke, Andreas Sprock, and Björn Steffen. *The Steiner Tree Reoptimization Problem with Sharpened Triangle Inequality*

**11.40 – 12.05:** Bart Jansen. *Kernelization for Maximum Leaf Spanning Tree with Positive Vertex Weights*

**12.05 – 12.30:** Marek Cygan, Łukasz Kowalik, and Borut Lužar. *A Planar Linear Arboricity Conjecture*

— **12.30 – 14.00:** Lunch —

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**14.00 – 15.00: Invited Talk by Bruce Reed**

introduced by Josep Díaz

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**Session:** Computational Geometry

chair: Josep Díaz

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**15.00 – 15.25:** Dieter Mitsche, Maria Saumell, and Rodrigo I. Silveira. *On the Number of Higher Order Delaunay Triangulations*

**15.25 – 15.50:** Jérémie Chalopin, Shantanu Das, Yann Disser, Matúš Mihalák, and Peter Widmayer. *How simple robots benefit from looking back*

— **16.00 – 23.00:** Social Event and Social Dinner (see page 5) —

**\*\*\* May 28 \*\*\***

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**9.30 – 10.30: Invited Talk by Monika Henzinger**

introduced by Tiziana Calamoneri

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— **10.30 – 10.50:** Coffee Break —

**Session:** Graph Algorithms II

chair: Maurizio Patrignani

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**10.50 – 11.15:** Burkhard Monien and Tobias Tscheuschner. *On the power of nodes of degree four in the local max-cut problem*

**11.15 – 11.40:** Jérémie Chalopin and Daniël Paulusma. *Packing Bipartite Graphs with Covers of Complete Bipartite Graphs*

**12.05 – 12.30:** Marek Cygan, Marcin Pilipczuk and Jakub Wojtaszczyk. *Irredundant set faster than  $O(2^n)$*

**11.40 – 12.05:** Dorothea Baumeister, Felix Brandt, Felix Fischer, Jan Hoffmann, and Jörg Rothe. *The Complexity of Computing Minimal Unidirectional Covering Sets*

**12.30 – 12.55:** Daniel Binkele-Raible, Henning Fernau, Alexander Langer, Ljiljana Brankovic, Joachim Kneis, Peter Rossmanith, Mathieu Liedloff, and Dieter Kratsch. *A Parameterized Route to Exact Puzzles: Breaking the  $2^n$ -Barrier for irredundancy*

— **12.55 – 14.15:** Lunch —

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## **14.15 – 15.15: Invited Talk by Eran Halperin**

introduced by Irene Finocchi

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**Session:** String & Network Algorithms      chair: Irene Finocchi

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**15.15 – 15.40:** Gianni Franceschini and Torben Hagerup. *Finding the Maximum Suffix with Fewer Comparisons*

**15.40 – 16.05:** Daniel Dressler and Martin Strehler. *Capacitated Confluent Flows: Complexity and Algorithms*

**16.05 – 16.30:** Reinhard Bauer, Tobias Columbus, Bastian Katz, Marcus Krug, and Dorothea Wagner. *Preprocessing Speed-Up Techniques is Hard*

**16.30 – 16.55:** Jen-Hou Chou and Chi-Jen Lu. *Communication Requirements for Stable Marriages*

## Session: Social Event

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### 16.00 – 19.00: Centrale Montemartini

The social event of the conference will consist of a visit to the “Centrale Montemartini” (<http://en.centralemontemartini.org/>), followed by the social dinner.

The former Giovanni Montemartini Thermolectric Centre, an extraordinary example of industrial archaeology, is part of the expositive space of the “Musei Capitolini” (<http://en.museicapitolini.org/>). Originally thought as a temporary solution to keep works of art moved from other display areas of the Musei Capitolini accessible to the public, this old thermo-electric plant has then been permanently acquired by the museum and keeps offering an unmatched opportunity to admire Roman sculptures with an unusual and charming industrial background.

Visits to the museum will be split in two shifts, one starting at 17.20 and the other at 17.30.

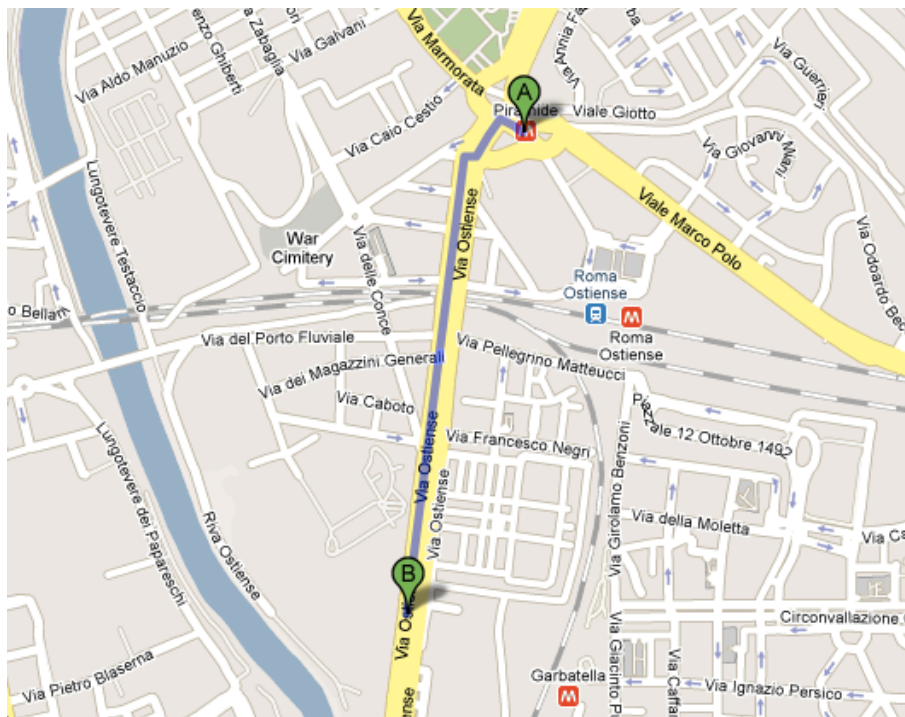


Figure 1: From the B line underground (A) to the Centrale Montemartini (B).

### Reaching the Centrale Montemartini

A shuttle bus will be leaving from the conference site (piazzale Aldo Moro) at 16.00 to bring us to the museum.

For those wishing to reach the Centrale Montemartini autonomously, the “Piramide” stop of the B line underground is 1.1 kilometers away (15 minutes walk). The address of the Centrale Montemartini is via Ostiense, 106. Please reach the Centrale within 17.00 to allow for distributing tickets and organize groups for the shifts.

### 19.00 – 23.00: Ristorante Consolini

The conference social dinner will take place at the restaurant “Consolini” <http://www.systemfree.net/ristoranteconsolini/>, located in via Marmorata, 28.

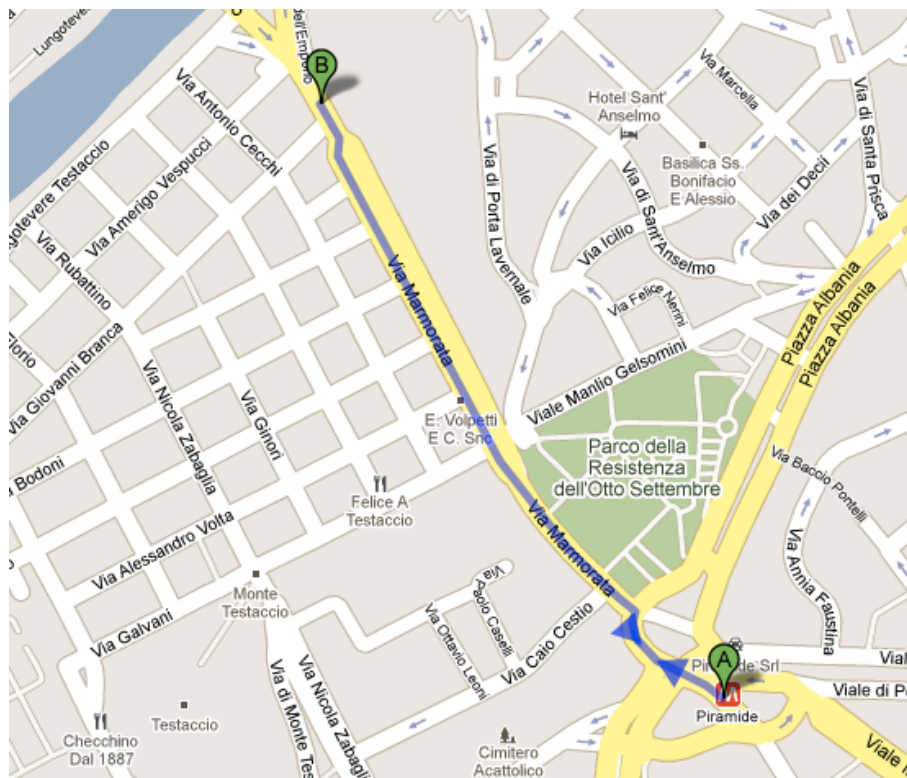


Figure 2: From the B line underground (A) to the Consolini restaurant (B).

### Reaching the Consolini restaurant

A shuttle bus will take us from the museum to the restaurant at 19.00 and back to the conference site (piazzale Aldo Moro) after dinner.

For those wishing to reach the restaurant autonomously, the “Piramide” stop of the B line underground is 800 meters away. Please reach the restaurant within 19.20.



# CIAC 2010 – Committees

## Steering Committee

- Giorgio Ausiello, Sapienza University of Rome
- Giuseppe F. Italiano, University of Rome Tor Vergata
- Rossella Petreschi, Sapienza University of Rome

## Program Committee

- Sandip Das, Indian Statistical Institute
- Josep Díaz (Chair), Universitat Politecnica de Catalunya
- Irene Finocchi, Sapienza University of Rome
- Fabrizio Grandoni, University of Rome Tor Vergata
- Kazuo Iwama, Kyoto University
- Jan Kratochvíl, Charles University
- Kurt Mehlhorn, Max Planck Institut
- Dieter Mitsche, Universitat Politecnica de Catalunya
- Jarik Nešetřil, Charles University
- Vangelis Th. Paschos, University Paris-Dauphine
- Maurizio Patrignani, University Roma Tre
- David Peleg, Weizmann Institute of Science
- Piotr Sankowski, University of Warsaw
- Paul Spirakis, University of Patras
- Geppino Pucci, University of Padova
- Jared Saia, University of New Mexico
- Dimitrios M. Thilikos, National and Kapodistrian University of Athens
- Luca Trevisan, University of California, Berkeley
- Lusheng Wang, City University of Hong Kong
- Peter Widmayer, ETH Zurich

## Organizing Committee

- Tiziana Calamoneri (Chair), Sapienza University of Rome
- Saverio Caminiti, Sapienza University of Rome
- Umberto Ferraro Petrillo, Sapienza University of Rome
- Emanuele G. Fusco, Sapienza University of Rome
- Maria Daniela Salvati, Sapienza University of Rome