

WALCOM 2016 PROGRAM
Asian Institute of Technology & Management, Khumaltar, Lalitpur
29-31 March 2016

Pre Workshop Day: March 28, 2016 (Monday)

17.00-21.00 **Registration & Reception**

Day 1: March 29, 2016 (Tuesday)

8.30-9.30 **Registration**

9.30-10.00 **Inauguration**

Invited Talk I (Chair: Rossella Petreschi)

10.00-11.00 *Popping Super bubbles and Discovering Clumps: Recent Developments in Biological Sequence Analysis*
- **Costas Iliopoulos**

11.00-11.30 **Refreshment**

Session 1: Graphs Colouring (Chair: Franz Brandenburg)

11.30-11.55 *Tropical Dominating Sets in Vertex-Coloured Graphs*
- J.A. Angles d'Auriac, C. Bujtas, H. El Maftouhi, M. Karpinski, **Y. Manoussakis**, L. Montero, N. Narayanan, L. Rosaz, J. Tapper and Z. Tuza

11.55 - 12.20 *On hamiltonian colorings of block graphs*
- **Devsri Bantva**

12.20 - 12.45 *Vertex-Coloring with Star-Defects*
- Patrizio Angelini, Michael Bekos, **Michael Kaufmann** and Vincenzo Roselli

12.45-14.00 **Working Lunch**

Session 2: Graphs Exploration (*Chair: Ryuhei Uehara*)

- 14.00-14.25 *Lower Bounds for Graph Exploration Using Local Policies*
- Aditya Kumar Akash, Sandor Fekete, Seoung Kyou Lee, Alejandro Lopez-Ortiz,
 Daniela Maftulea and James McLurkin
- 14.25-14.50 *Formation of General Position by Asynchronous Mobile Robots Under One-axis Agreement*
- Subhash Bhagat, **Sruti Gan Chaudhuri** and **Krishnendu Mukhopadhyaya**
- 14.50-15.15 *Optimal Distributed Searching in the Plane with and without Uncertainty*
- Alejandro Lopez-Ortiz and **Daniela Maftuleac**
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15.15-15.35 **Tea Break**

Invited Talk II (*Chair: Mohammad Kaykobad*)

- 15.35-16.35 *2-Edge and 2-Vertex Connectivity Problems in Directed Graphs*
- **Giuseppe F. Italiano**
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16.35-16.45 **Break**

Session 3: Graphs Algorithms (*Chair: Giuseppe F. Italiano*)

- 16.45-17.10 *On Aligned Bar 1-Visibility Graph*
- **Franz Brandenburg**, Alexander Esch and Daniel Neuwirth
- 17.10-17.35 *A Necessary Condition and a Sufficient Condition for Pairwise Compatibility Graphs*
- **Md. Iqbal Hossain**, Sammi Abida Salma and **Md. Saidur Rahman**
- 17.35-18.00 *Mixing Times of Markov Chains of 2-Orientations*
- **Stefan Felsner** and Daniel Heldt
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18.00-21.00 **Business Meeting & Dinner**

Day 2: March 30, 2016 (Wednesday)

Session 4: Computational Geometry (Chair: Md. Sohel Rahman)

- 9.00-9.25 *Computing a Minimum-Width Square Annulus in Arbitrary Orientation*
- **Sang Won Bae**
- 9.25-9.50 *A General Framework for Searching on a Line*
- Prosenjit Bose and **Jean-Lou De Carufel**
- 9.50-10.15 *An optimal algorithm for computing the integer closure of UTVPI constraints*
- K. Subramani and **Piotr Wojciechowski**
- 10.15-10.40 *Covering Points with Convex Sets of Minimum Size*
- **Hwan-Gue Cho**, William Evans, Noushin Saeedi and **Chan-Su Shin**
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10.40-11.00 **Tea Break**

Invited Talk III (Chair: Ljiljana Brankovic)

- 11.00-12.00 *Beyond Cyber-Physical Era: What's Next?*
- **Sajal Das**
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Session 5: Data Structures (Chair: Yannis Manoussakis)

- 12.00-12.25 *Efficient Generation of Top-k Procurements in a Multi-Item Auction*
- **Biswajit Sanyal**, Subhashis Majumder and Wing-Kai Hon
- 12.25-12.50 *Counting Subgraphs in Relational Event Graphs*
- **Farah Chanchary** and Anil Maheshwari
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12.50-14.05 **Working Lunch**

Session 6: Computational Complexity (Chair: Vangelis Paschos)

- 14.05-14.30 *Large Independent Sets in Subquartic Planar Graphs*
- **Matthias Mnich**

- 14.30-14.55 *As Close As It Gets*
- **Mike Behrisch**, Miki Hermann, Stefan Mengel and Gernot Salzer
- 14.55-15.20 *Shortest Reconfiguration of Sliding Tokens on a Caterpillar*
- **Takeshi Yamada** and **Ryuhei Uehara**

15.20-15.40 **Tea Break**

Session 7 Approximation Algorithms (Chair: Sajal Das)

- 15.40-16.05 *Fast and Simple Local Algorithms for 2-Edge Dominating Sets and 3-Total Vertex Covers*
- **Toshihiro Fujito** and Daichi Suzuki
- 16.05-16.30 *Approximation Algorithms for Generalized Bounded Tree Cover*
- Barun Gorain, **Partha Sarathi**, Mandaland and **Krishnendu Mukhopadhyaya**
- 16.30-16.55 *Approximation Algorithms for Three Dimensional Protein Folding*
- Dipan Lal Shaw, **Md. Sohel Rahman**, A. S. M. Sohidull Islam and Shuvasish Karmaker
- 16.55-17.20 *Parameterization of Strategy-Proof Mechanisms in the Obnoxious Facility Game*
- Morito Oomine, **Aleksandar Shurbevski** and Hiroshi Nagamochi
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19.00-21.00 **Banquet**

Day 3: March 31, 2016 (Thursday)

Session 8: On-line Algorithms (Chair: Pramod Pradhan)

- 9.00-9.25 *Optimal Online Algorithms for the Multi-Objective Time Series Search Problem*
- **Shun Hasegawa** and **Toshiya Itoh**
- 9.25-9.50 *Fully Dynamically maintaining minimal integral separator for Threshold and Difference Graphs*
- Tiziana Calamoneri, Angelo Monti and **Rossella Petreschi**
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9.50-10.10 **Tea Break**

Invited Talk IV (Chair: Md. Saidur Rahaman)

- 10.10-11.10 *Social Pressure can Subvert Majority in Social Networks*
- **Giuseppe Persiano**
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11.10-11.20 **Break**

Session 9: Algorithms (Chair: Giuseppe Persiano)

- 11.20-11.45 *A Lagrangian Relaxation-based Heuristic to Solve Large Extended Graph Partitioning Problems*
- **Oliver Czibula**, Hanyu Gu and Yakov Zinder
- 11.45-12.10 *Semimetric Properties of Sørensen-Dice and Tversky Indices*
- **Alonso Gragera** and **Vorapong Suppakitpaisarn**
- 12.10-12.35 *Finding mode using equality comparisons*
- **Varunkumar Jayapaul**, Venkatesh Raman and Srinivasa Rao Satti
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12.35----- **Lunch & Tour**
