

# The 13th Annual International Computing and Combinatorics Conference

(COCOON 2007)

July 16-19 • Banff, Alberta, Canada

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Program: July 15-19, 2007 [PDF]

**Sunday, July 15th:**

**Monday, July 16th:**

**Tuesday, July 17th:**

**Wednesday, July 18th:**

**Thursday, July 19th:**

	<b>Chair Dr. Guohui Lin</b>
1:40 - 2:00pm	<b>Changed</b> "Alignments with Non-overlapping Moves, Inversions and Tandem Duplications in $O(n^4)$ " by Christian Ledergerber and Christophe Dessimoz
2:00 - 2:20pm	"An 8/5-approximation algorithm for a hard variant of stable marriage" by Robert Irving and David Manlove
2:20 - 2:40pm	"Approximation Algorithm for the black and white traveling salesman problem" by Binay Bhattacharya, Yuzhuang Hu and Alexander Kononov
2:40 - 3:00pm	Closing Remarks

**Sunday, July 15th:**

4:00 - 8:00pm	Registration
6:00 - 8:00pm	Reception

**Monday, July 16th:**

7:00 - 8:20am	Breakfast
8:20 - 8:30am	Opening Remarks
	<b>Chair Dr. Francis Chin</b>
8:30 - 9:20am	Invited Talk by Dr. Srinivas Aluru: "The Combinatorics of Sequencing the Corn Genome"
9:20 - 9:40am	"A New Field Splitting Algorithm for Intensity-Modulated Radiation Therapy" by Danny Z. Chen, Mark A. Healy, Chao Wang and Xiaodong Wu
9:40 - 10:00am	"A New Recombination Lower Bound and The Minimum Perfect Phylogenetic Forest Problem" by Yufeng Wu and Dan Gusfield
10:00 - 10:30am	Coffee Break
	<b>Chair Dr. Lusheng Wang</b>
10:30 - 10:50am	"Seed-Based Exclusion Method for Non-Coding RNA Gene Search" by Jean-Eudes Duchesne, Mathieu Giraud and Nadia El-Mabrouk
10:50 - 11:10am	"A New Quartet Approach for Reconstructing Phylogenetic Trees: Quartet Joining Method" by Lei Xin, Bin Ma and Kaizhong Zhang
11:10 - 11:30am	"Integer Programming Formulations and Computations solving Phylogenetic and Population Genetic Problems with Missing or Genotypic Data" by Dan Gusfield, Yelena Frid and Daniel Brown
11:30 - 1:30pm	Lunch

	<b>Chair Dr. Danny Chen</b>
1:40 - 2:00pm	"Improved Exact Algorithms for Counting 3- and 4- Colorings" by Fedor V. Fomin, Serge Gaspers and Saket Saurabh
2:00 - 2:20pm	"Connected Coloring Completion for General Graphs: Algorithms and Complexity" by Benny Chor, Michael R. Fellows, Mark A. Ragan, Frances A. Rosamond, Sagi Snir and Igor Razgon
2:20 - 2:40pm	"Quadratic Kernelization for Convex Recoloring of Trees" by Hans L. Bodlaender, Michael R. Fellows, Michael A. Langston, Mark A. Ragan, Frances A. Rosamond and Mark Weyer
2:40 - 3:00pm	"On the Number of Cycles in Planar Graphs" by Kevin Buchin, Christian Knauer, Klaus Kriegel, André Schulz and Reimund Seideel
3:00 - 3:30pm	Coffee Break
	<b>Chair Dr. Xizhong Zheng</b>
3:30 - 3:50pm	"An Improved Exact Algorithm for Cubic Graph TSP" by Kazuo Iwama and Takuya Nakashima
3:50 - 4:10pm	"Geometric intersection graphs: Do short cycles help?" by Jan Kratochvíl and Martin Pergel
4:10 - 4:30pm	"Dimension, Halfspaces, and the Density of Hard Sets" by Ryan Harkins and John Hitchcock
4:30 - 4:50pm	"Isolation Concepts for Enumerating Dense Subgraphs" by Christian Komusiewicz, Falk Hüffner, Hannes Moser and Rolf Niedermeier.
4:50 - 5:10pm	<b>Changed</b> "Improved randomized and deterministic algorithms for set splitting problem" by Jianer Chen and Songjian Lu
5:10 - 5:30pm	"Counting minimum weighted dominating sets" by Fedor V. Fomin and Alexey A. Stepanov
5:30 - 7:30pm	Dinner

**Tuesday, July 17th:**

7:00 - 8:30am	Breakfast
	<b>Chair Dr. Cao An Wang</b>
8:30 - 9:20am	Invited Talk by Dr. Francis Chin: "Online Frequency Assignment in Wireless Communication Networks"
9:20 - 9:40am	"Online Interval Scheduling: Randomized and Multiprocessor Cases" by Stanley Fung, CK Poon and Feifeng Zheng

9:40 - 10:00am	<i>"Scheduling selfish tasks: about the performance of truthful algorithms"</i> by George Christodoulou, Laurent Gourves and Fanny Pascual	
10:00 - 10:30am	Coffee Break	
	<b>Chair Dr. Kazuo Iwama</b>	<b>Chair Dr. Jianer Chen</b>
10:30 - 10:50am	<i>"Volume Computation Using a Direct Monte Carlo Method"</i> by Sheng Liu, Jian Zhang and Binhai Zhu	<i>"Finding Many Optimal Paths without Growing Any Optimal Path Trees"</i> by Danny Z. Chen and Ewa Misiolek
10:50 - 11:10am	<i>"Improved Throughput Bounds for Interference-aware Routing in Wireless Networks"</i> by Chiranjeeb Buragohain, Subhash Suri, Csaba Toth and Yunhong Zhou	<i>"Enumerating Constrained Non-crossing Geometric Spanning Trees"</i> by Naoki Katoh and Shin-ichi Tanigawa
11:10 - 11:30am	<i>"Generating Minimal k-Vertex Connected Spanning Subgraphs"</i> by Endre Boros, Konrad Borys, Khaled Elbassioni, Vladimir Gurvich, Kaz Makino and Gabor Rudolf	<i>"Colored Simultaneous Geometric Embeddings"</i> by Ulrik Brandes, Cesim Erten, J. Joseph Fowler, Stephen Kobourov, Fabrizio Frati, Markus Geyer, Michael Kaufmann, Carsten Gutwenger, Petra Mutzel, Seok-Hee Hong, Giuseppe Liotta and Antonios Symvonis
11:30 - 1:30pm	Lunch	

	<b>Chair Dr. Binhai Zhu</b>	<b>Chair Dr. Yunhong Zhou</b>
1:40 - 2:00pm	<i>"Properties of Symmetric Incentive Compatible Auctions"</i> by Xiaotie Deng, Kazuo Iwama, Qi Qi, Aries Wei Sun and Toyotaka Tasaka	<i>"The Informational Content of Canonical Disjoint NP-Pairs"</i> by Christian Glaßer, Alan Selman and Liyu Zhang
2:00 - 2:20pm	<i>"Finding Equilibria in Games of No Chance"</i> by Kristoffer Arnsfelt Hansen, Peter Bro Miltersen and Troels Bjerre Sørensen	<i>"On the representations of NC and Log-space real numbers"</i> by Fuxiang Yu
2:20 - 2:40pm	<i>"Efficient testing of forecasts"</i> by Ching-Lueh Chang and Yuh-Dauh Lyuu	<i>"Initially-Bounded Computability and Hierarchy of Computability"</i> by Xizhong Zheng
2:40 - 3:00pm	<i>"When Does Greedy Learning of Relevant Attributes Succeed? - A Fourier-based Characterization"</i> by Jan Arpe and Ruediger Reischuk	<i>"Streaming algorithms measured in terms of the computed quantity"</i> by Shengyu Zhang
3:00 - 3:30pm	Coffee Break	
	<b>Chair Dr. Yong Gao</b>	<b>Chair Dr. Yuh-Dauh Lyuu</b>
3:30 - 3:50pm	<i>"A Randomized Approximation Algorithm for Parameterized 3-D Matching Counting Problem"</i> by Yunlong Liu, Jianer Chen and Jianxin Wang	<i>"On the Hardness of Optimization in Power Law Graphs"</i> by Alessandro Ferrante, Gopal Pandurangan and Kihong Park
3:50 - 4:10pm	<i>"Optimal Offline Extraction of Irredundant Motif Bases"</i> by Alberto Apostolico and Claudia Tagliacollo	<i>"Can a Graph Have Distinct Regular Partitions?"</i> by Noga Alon, Asaf Shapira and Uri Stav
4:10 - 4:30pm	<i>"Linear Algorithm for Broadcasting in Unicyclic Graphs"</i> by Edward Maraachlian and Hovhannes Harutyunyan	<i>"Algorithms for core stability, core largeness, exactness, and extendability of flow games"</i> by Qizhi Fang, Rudolf Fleischer, Jian Li and Xiaoxun Sun
4:30 - 4:50pm	<i>"An Improved Algorithm for Online Unit Clustering"</i> by Hamid Zarrabi-Zadeh and Timothy M. Chan	<i>"Computing Symmetric Boolean Functions by Circuits with Few Exact Threshold Gates"</i> by Kristoffer Arnsfelt Hansen
4:50 - 5:10pm	<i>"Linear Time Algorithms for Finding a Dominating Set of Fixed Size in Degenerated Graphs"</i> by Noga Alon and Shai Gutner	<i>"On the Complexity of Finding an Unknown Cut Via Vertex Queries"</i> by Peyman Afshani, Ehsan Chiniforooshan, Reza Dorrigiv, Arash Farzan, Mehdi Mirzazadeh, Narges Simjourn and Hamid Zarrabi-Zadeh
5:10 - 5:30pm	<i>"Single-edge monotonic sequences of graphs and linear-time algorithms for minimal completions and deletions"</i> by Pinar Heggernes and Charis Papadopoulos	<i>"'Resistant' Polynomials and Stronger Lower Bounds for Depth-Three Arithmetical Formulas"</i> by Maurice Jansen and Kenneth Regan
6:00 - 9:00pm	Conference Banquet	

### Wednesday, July 18th:

7:00 - 9:00am	Breakfast
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Conference Fun Day!

### Thursday, July 19th:

7:00 - 8:30am	Breakfast
	<b>Chair Dr. Bin Ma</b>
8:30 - 9:20am	Invited Talk by Ming Li: <i>"Information Distance From a Question to an Answer"</i>
9:20 - 9:40am	<i>"An Improved Algorithm for Tree Edit Distance Incorporating Structural Linearity"</i> by Shihyen Chen and Kaizhong Zhang
9:40 - 10:00am	<i>"Approximation Algorithms for Reconstructing the Duplication History of Tandem Repeats"</i> by Lusheng Wang, Zhanyong Wang and Zhi-Zhong Chen
10:00 - 10:30am	Coffee Break
	<b>Chair Zhipeng Cai</b>
10:30 - 10:50am	<i>"Priority Algorithms for the Subset-Sum Problem"</i> by Yuli Ye and Allan Borodin
10:50 - 11:10am	<i>"Distributed approximation algorithms for weighted problems in minor-closed families"</i> by Andrzej Czygrinow and Michał Hanckowiak
11:10 - 11:30am	<i>"1-local 13/9-competitive Algorithm for multicoloring triangle-free hexagonal graph"</i> by Francis Chin, Yong Zhang and Hong Zhu
11:30 - 1:30pm	Lunch