

REPORT FROM THE JAPANESE CHAPTER

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EATCS-JP/LA Workshop on TCS and Presentation Awards

The twelfth *EATCS/LA Workshop on Theoretical Computer Science* was held at Research Institute of Mathematical Sciences, Kyoto University, January 28 to January 30, 2014. (The program also can be found at <http://www2.infonets.hiroshima-u.ac.jp/lasymp/2014W/program/>.)

By attendees' voting, **Prof. Hiroshi Imai** (University of Tokyo) and **Ms. Ai Ishida** (Tokyo Institute of Technology) were selected at the the twelfth EATCS/LA Presentation Award:

Solving a Max Cut Benchmark by an Optimization Solver by Takuto Ikuta, Hiroshi Imai, Yosuke Yano (The University of Tokyo)

Non-interactive Zero-Knowledge Proof Systems for Disavowal and Its Applications by Ai Ishida (Tokyo Institute of Technology), Keita Emura (National Institute of Information and Communications Technology), Goichiro Hanaoka, Yusuke Sakai (National Institute of Advanced Industrial Science and Technology), Keisuke Tanaka (Tokyo Institute of Technology)

The award will be given them at the Summer LA Symposium held in July 2015.

We also established another presentation award, named "EATCS/LA Student Presentation Award" to encourage students. **Mr. Yuto Nakashima** (Kyushu University) who presented the following paper, was selected at the fourth EATCS/LA Student Presentation Award:

Lyndon \leq LZ77 Conjecture by Yuto Nakashima, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)

The award (with some gift for playing in his laboratory) has been already given him at the last day, January 30, 2015.

Congratulations!

This workshop is jointly organized with *LA symposium*, Japanese association of theoretical computer scientists. Its purpose is to give a place for discussing topics on all aspects of theoretical computer science. (In fact, I've heard some different opinions that "L" stands for logic and/or language, and "A" stands for algorithm and/or automaton.) That is, this workshop is an unrefereed familiar meeting. All submissions are accepted for the presentation. There should be no

problem of presenting these papers in refereed conferences and/or journals. We hold it twice a year (January/February, and July/August). If you have a chance, I recommend you to attend it. You can find the program of the last workshop in Appendix of this report.

Forthcoming Events in Japan

I am very happy to announce that (again) the first ICALP outside Europe will be held in Kyoto, Japan. That will be collocated with LICS 2015. You can find more information on the conferences at <http://www.kurims.kyoto-u.ac.jp/icalp-lics2015/>.

ICALP 2015

The 42nd International Colloquium on Automata, Languages and Programming (ICALP 2015) will be held in Kyoto, Japan, during the week 6-10 July, 2015. The conference will be held at Grand Prince Hotel Kyoto (<http://www.princehotels.com/en/kyoto/>), and workshops will be held at Kyoto University (<http://www.kyoto-u.ac.jp/en>).

LICS 2015

The 30th Annual ACM/IEEE Symposium on Logic in Computer Science (LICS 2015) will be held in Kyoto, Japan, July 6–10, 2015. The details can be found at <http://lics.rwth-aachen.de/lics15/>.

I am also happy to announce that ISAAC will be held in Nagoya, Japan:

ISAAC 2015

The 26th International Symposium on Algorithms and Computation (ISAAC 2015) will be held in Nagoya, Japan, December 9–11, 2015. The important dates are as follows (To make sure for these important dates, please check the web site at <http://www.al.cm.is.nagoya-u.ac.jp/isaac2015/>):

Submission Deadline: June 19, 2015.

Notification of Acceptance: By August 31, 2015.

Camera Ready Copy: September 21, 2015.

Appendix:

Program of EATCS-JP/LA workshop on TCS (January 28th to 30th, 2015)

In the following program, “*” indicates that the talk is given in Student Session (shorter than the ordinary talk).

New Algorithms for Order Preserving Pattern Matching*

Takahiro Aoki, Yoshiaki Matsuoka, Shunsuke Inenaga, Hideo Bannai, Masayuki

Takeda (Kyushu University)

Enumeration of α -Gapped Repeat on Overlap-Free Strings*

- Yuta Fujishige, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)*
Enumeration of α -Gapped Repeats in a Word*
Yuka Tanimura, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)
- Non-interactive Zero-Knowledge Proof Systems for Disavowal and Its Applications
Ai Ishida (Tokyo Institute of Technology), Keita Emura (National Institute of Information and Communications Technology), Goichiro Hanaoka, Yusuke Sakai (National Institute of Advanced Industrial Science and Technology), Keisuke Tanaka (Tokyo Institute of Technology)
- Streaming Algorithms for Sampling and Their Applications
Ryosuke Nakata (Tokyo Institute of Technology), Maxim Jourenko (Aachen University, Tokyo Institute of Technology), Keisuke Tanaka (Tokyo Institute of Technology/JST CREST)
- On Arithmetic Garbled Circuits
Tomoyuki Komatsu (Tokyo Institute of Technology), Keisuke Tanaka (Tokyo Institute of Technology/JST CREST)
- $8k$ -Degree Grid Graph Representation of Tabular Diagrams
Takeo Yaku (Nihon University)
- Online Computation of Fixed Gapped Palindrome*
Michitaro Nakamura, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)
- Computing a Longest Common Flexible Pattern Including a Constrained Flexible Pattern*
Keita Kuboi, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)
- All Five-Variable Logic Functions Can Be Computed by Three-Input Majority Gates with Depth Four*
Masao Moriya, Kazuyoshi Takagi, Naofumi Takagi (Kyoto University)
- Approximating the Connected 2-Edge Dominating Set Problem
Tomoaki Shimoda, Toshihiro Fujito (Toyohashi University of Technology)
- On Computability and Constructive Provability for Existence Theorems
Makoto Fujiwara (Tohoku University)
- Simple #SAT Algorithms for Bounded Width Circuits and Bounded Depth Formulas
Hiroki Morizumi (Shimane University)
- Dynamic Compressed Index
Takaaki Nishimoto (Kyushu University), Tomohiro I (Technische Universitaet Dortmund, Germany), Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)
- The Class of the Computational Complexity of the Coin-Exchange Problem of Frobenius
Shunichi Matsubara (Aoyama Gakuin University)
- Some Properties of Hippocratic Randomness
Hayato Takahashi (Gifu University)
- On the Spanning Tree Congestion of Small Diameter Graphs*
Kohei Kubo, Yukiko Yamauchi, Shuji Kijima, Masafumi Yamashita (Kyushu University)

A Distributed Locomotion Algorithm for 3-Dimensional Metamorphic Robotic System^{1*}

Fengqi Chen, Yukiko Yamauchi, Shuji Kijima, Masafumi Yamashita (Kyushu University)

The Team Assembling Problem for Heterogeneous Mobile Robots*

Zhiqiang Liu, Yukiko Yamauchi, Shuji Kijima, Masafumi Yamashita (Kyushu University)

Tangle and Ideal

Koichi Yamazaki (Gunma University)

Analyses of Space Complexity of Tree Evaluation Problems

Kazuo Iwama (Kyoto University), Atsuki Nagao (Kyoto University/JSPS CD2 Research Fellow)

Analytic Continuation in iRRAM: Implementations Inspired by Real Complexity Theory

Akitoshi Kawamura (University of Tokyo), Florian Steinberg, Holger Thies (Technische Universitaet Darmstadt)

Space Complexity of Self-Stabilizing Leader Election in Population Protocol on Hypernetworks*

Xiaoguang Xu, Yukiko Yamauchi, Shuji Kijima, Masafumi Yamashita (Kyushu University)

Lyndon \leq LZ77 Conjecture*

Yuto Nakashima, Shunsuke Inenaga, Hideo Bannai, Masayuki Takeda (Kyushu University)

Randomized Approximation of the Frequency of Items in a Stream Using a Small Space*

Heejae Yim, Yukiko Yamauchi, Shuji Kijima, Masafumi Yamashita (Kyushu University)

Extracting LCS from Seaweed Diagrams

Yoshifumi Sakai (Tohoku University)

Polynomial-Time Learning of Formal Graph Systems with Bounded Tree-Width

Takayoshi Shoudai (Kyushu International University), Tomoyuki Uchida (Hiroshima City University)

Effective Method to Compute Frequencies of Order-Preserving n -Gram by Suffix Counting Representation

Yusuke Sato, Kazuyuki Narisawa, Ayumi Shinohara (Tohoku University)

Solving a Max Cut Benchmark by an Optimization Solver

Takuto Ikuta, Hiroshi Imai, Yosuke Yano (The University of Tokyo)

The Number of Matrix Multiplications for the Evaluation of Matrix Polynomial $I + A + A^2 + \dots + A^{N-1}$ *

Kotaro Matsumoto, Naofumi Takagi, Kazuyoshi Takagi (Kyoto University)

Abstracting Weighted Path Orders for Proving Termination of Term Rewriting Systems*

Takanori Omae (Nagoya University), Keiichirou Kusakari (Gifu University), Akihisa Yamada (National Institute of Advanced Industrial Science and Technology), Toshiki Sakabe (Nagoya University)

A Fast Filtration for Order-Preserving Matching

Youhei Ueki, Kazuyuki Narisawa, Ayumi Shinohara (Tohoku University)

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THE JAPANESE CHAPTER

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