

Da-Jung Cho: Curriculum Vitae

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Name: Da-Jung Cho

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Education Information

- 2011.09 ~ Current: Yonsei University, Ph.D candidate, 12th semester
- 2007.03 ~ 2011.08: Korea Polytechnic University, Bachelor's Degree

Research Interests: Formal Language Theory, Automata Theory, Natural Computing

- Characterizing bio-inspired operation based on formal language theory
- Examining properties of the bio-inspired operation based on automata theory
- Designing an efficient algorithm for decision problem over the bio-inspired operation and biological phenomenon predicting problem

Publications

■ Conferences

1. **Deduplication on Finite Automata and Nested Duplication Systems**, Da-Jung Cho, Yo-Sub Han, Hwee Kim, *Unconventional Computation & Natural Computation (UCNC'17)*, LNCS10240, 194-205, 2017
2. **Outfix-Guided Insertion**, Da-Jung Cho, Yo-Sub Han, Timothy Ng, Kai Salomaa, *Developments in Language Theory (DLT'16)*, LNCS 9840, 102-113, 2016
3. **Pseudoknot-Generating Operation**, Da-Jung Cho, Yo-Sub Han, Timothy Ng and Kai Salomaa, *Current Trends in Theory and Practice of Computer Science (SOFSEM'16)*, LNCS 9587, 241-252, 2016
4. **Frequent Pattern Mining with Non-overlapping Inversions**, Da-Jung Cho, Yo-Sub Han, Hwee Kim, *Language and Automata Theory and Applications (LATA'15)*, LNCS 8977, 121-132, 2015
5. **State Complexity of Permutations on Finite Languages over Binary Alphabets**, Alexandros Palioudakis, Da-Jung Cho, Daniel Goc, Yo-Sub Han, Sang-Ki Ko, Kai Salomaa, *Descriptive Complexity of Formal Systems (DCFS'15)*, LNCS 9118, 220-230, 2015
6. **Duplications and Pseudo-Duplications**, Da-Jung Cho, Yo-Sub Han, Hwee Kim, Alexandros Palioudakis, Kai Salomaa, *Unconventional Computation & Natural Computation (UCNC'15)*, LNCS 9252, 157-168, 2015
7. **State Complexity of Inversion Operations**, Da-Jung Cho, Yo-Sub Han, Sang-Ki Ko, Kai Salomaa, *Descriptive Complexity of Formal Systems (DCFS'14)*, LNCS 8614, 102-113, 2014
8. **Pseudo-Inversion on Formal Languages**, Da-Jung Cho, Yo-Sub Han, Shin-Dong Kang, Hwee Kim, Sang-Ki Ko, Kai Salomaa, *Unconventional Computation & Natural Computation (UCNC'14)*, LNCS 8553, 93-104, 2014, "Best Paper Score Award"
9. **Alignment with Non-Overlapping Inversions on Two Strings**, Da-Jung Cho, Yo-Sub Han, Hwee Kim, *Algorithms and Computation (WALCOM'14)*, LNCS 8344, 261-272, 2014

■ Journals

1. **State Complexity of Permutation on Finite Languages over a Binary Alphabet**, Da-Jung Cho, Daniel Goc, Yo-Sub Han, Sang-Ki Ko, Alexandros Palioudakis, Kai Salomaa, *Theoretical Computer Science (TCS)*, Vol. 682, 67-78, June 2017
2. **Duplications and Pseudo-Duplications**, Da-Jung Cho, Yo-Sub Han, Hwee Kim,

Alexandros Palioudakis, Kai Salomaa, *International Journal of Unconventional Computing (IJUC)*, Vol. 12(2-3), 145-167, May 2016

3. **Pseudo-Inversion: Closure Properties and Decidability**, Da-Jung Cho, Yo-Sub Han, Shin-Dong Kang, Hwee Kim, Sang-Ki Ko, Kai Salomaa, *Natural Computing*, Vol. 15, 31-39, March 2016
4. **State Complexity of Inversion Operations**, Da-Jung Cho, Yo-Sub Han, Sang-Ki Ko, Kai Salomaa, *Theoretical Computer Science (TCS)*, Vol. 610, 2-12, January 2016
5. **Alignment with Non-Overlapping Inversions and Translocations on Two Strings**, Da-Jung Cho, Yo-Sub Han, Hwee Kim, *Theoretical Computer Science (TCS)*, Vol. 575, 90-101, April 2015
6. **Decidability of Involution Hypercodes**, Da-Jung Cho, Yo-Sub Han, Sang-Ki Ko, *Theoretical Computer Science (TCS)*, Vol. 550, 90-99, September 2014

■ Patents

1. **Apparatus and Method for Determining if Site-Directed Deletion is Possible**, Yo-Sub Han, Da-Jung Cho, Hwee Kim, 10-2017-0075890, 2017
2. **Method for Creating Automata for Determination of Nested-Duplication**, Yo-Sub Han, Da-Jung Cho, Hwee Kim, 10-2017-0066232, 2017
3. **Method and Device for Mining Pattern on Inversion of Biological Sequence**, Yo-Sub Han, Hwee Kim, Da-Jung Cho, 10-1636202, 2016
4. **Device and Method for Determining Pseudoknot Structure of Biological Sequence**, Yo-Sub Han, Da-Jung Cho, Hwee Kim, 10-2016-0007615, 2016

Awards

1. Spring 2016 semester: NAVER Ph.D Fellowship from NAVER
2. Spring 2016 semester: The Graduate Fellowship from Dept. Computer Science, Yonsei University
3. Fall 2016 semester: The Graduate Fellowship from Dept. Computer Science, Yonsei University
4. 2014. 07: Awarded Best Paper for the paper "**Pseudo-Inversion on Formal Languages**" in UCNC'14

Activities

1. Local Organizing Committee of the 21st International Conference on Implementation and Application of Automata (CIAA) 2016
2. 2016.06 ~ 2016.07: Visiting researcher at Queen's University
3. 2015.09 ~ 2015.12: Lecturer, Yonsei University, Introduction to Engineering Design