

# Duc A. Hoang

## Curriculum Vitae



This CV was updated on June 20, 2022.

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### Personal Information

Full name (Vietnamese) Hoàng Anh Đức.  
Name (in publications) Duc A. Hoang.  
Name (Japanese Katakana) ホアンアンドウック.  
Nationality Vietnamese.  
Gender Male.  
Languages Vietnamese (Native) and English (Professional working proficiency).

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### Current Position

As of June 16, 2021, I am a **Postdoctoral Researcher** at Graduate School of Informatics, Kyoto University (Kyoto, Japan) under the direction of Shin-ichi MINATO, in the B01 Group of the AFSA Project (supported by KAKENHI Grant Number 20H05964).

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### Contact Information

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### Research Interests

- Graph Algorithms.
- Combinatorial Reconfiguration.

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### Education

Apr. 2015 - Jun. 2018 **PhD Degree in Information Science**  
○ **Institution:** Japan Advanced Institute of Science and Technology (Ishikawa, Japan).  
○ **Supervisor:** Ryuhei UEHARA.  
○ **Thesis Title:** Independent Set Reconfiguration and Related Problems for Some Restricted Graphs.

Apr. 2013 - Mar. 2015 **Master Degree in Information Science**  
○ **Institution:** Japan Advanced Institute of Science and Technology (Ishikawa, Japan).  
○ **Supervisor:** Ryuhei UEHARA.  
○ **Thesis Title:** The Independent Set Reconfiguration Problem on Some Restricted Graphs.

Sep. 2008 - Mar. 2013 **Bachelor Degree in Mathematics**  
○ **Institution:** VNU University of Science (Hanoi, Vietnam).  
○ **Thesis Advisor:** Thi Ha Duong PHAN.  
○ **Thesis Title:** The Matrix-Tree Theorem and Some Related Problems.

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## Employment

Jun. 16, 2021 - present **Postdoctoral Researcher**  
Group of Computer Algorithms, Graduate School of Informatics, Kyoto University (Kyoto, Japan).  
Supervisor: Shin-ichi MINATO.  
B01 Group, AFSA Project (supported by KAKENHI Grant Number 20H05964).

Apr. 01, 2021 - Jun. 15, 2021 **Research Assistant**  
Kyutech Algorithms Group, School of Computer Science and Systems Engineering, Kyushu Institute of Technology (Fukuoka, Japan).  
Supervisor: Toshiki SAITOH.

Apr. 01, 2019 - Mar. 31, 2021 **Postdoctoral Researcher**  
Kyutech Algorithms Group, School of Computer Science and Systems Engineering, Kyushu Institute of Technology (Fukuoka, Japan).  
Supervisor: Toshiki SAITOH.

Sep. 05, 2018 - Dec. 31, 2018 **Lecturer**  
Department of Informatics, Faculty of Mathematics, Mechanics and Informatics, VNU University of Science (Hanoi, Vietnam).

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## Research Grants

Aug. 30, 2019 - Mar. 31, 2021 **JSPS KAKENHI Grant-in-Aid for Research Activity start-up**  
○ **Grant Number:** 19K24349.  
○ **Project Title:** A study on reconfiguration problems under Token Sliding and their applications.  
○ **Role:** Principal Investigator.

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## Awards

Jun. 22, 2018 JAIST Outstanding Performance Award for doctoral students.

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## Research Visits

Apr. 07, 2021 - Apr. 08, 2021 Group of Computer Algorithms (Minato Lab), Graduate School of Informatics, Kyoto University (Kyoto, Japan).  
Host: Shin-ichi MINATO.

Dec. 23, 2019 - Dec. 25, 2019 Faculty of Advanced Science and Technology, Kumamoto University (Kumamoto, Japan).  
Host: Yota OTACHI.

Apr. 01, 2016 - Jul. 08, 2016 Algorithm Theory Lab,  
Graduate School of Information Sciences, Tohoku University (Sendai, Japan).  
Host: Xiao ZHOU and Takehiro ITO.

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## Research Activities

(Sub-)Reviewer **Journal**

- Journal of Information Processing (2020)
- Theoretical Computer Science (2018, 2019, 2021)
- Discrete Applied Mathematics (2018)
- IEICE TRANSACTIONS on Fundamentals of Electronics, Communications and Computer Sciences (2017, 2019)

**Conference**

- WALCOM 2021, ICALP 2021, MFCS 2021
- WG 2020, COCOON 2020, ISAAC 2020
- MFCS 2019
- COCOON 2018

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## Teaching Experiences

A list of courses I have participated in as a **Lecturer** or **Teaching Assistant**. The courses in English (Vietnamese) are described in English (Vietnamese).

- Sep. 10, 2018 - Dec. 13, 2018 **Lecturer** – VNU-HUS MAT3302: Discrete Mathematics (exercises)
- Sep. 06, 2018 - Dec. 13, 2018 **Lecturer** – VNU-HUS MAT3302 2TNT: Discrete Mathematics (exercises)
- Oct. 11, 2017 - Nov. 30, 2017 **Teaching Assistant** – JAIST I216: Computational Complexity and Discrete Mathematics.
- Apr. 12, 2017 - Jun. 02, 2017 **Teaching Assistant** – JAIST I216: Computational Complexity and Discrete Mathematics.
- Oct. 12, 2016 - Dec. 01, 2016 **Teaching Assistant** – JAIST I216: Computational Complexity and Discrete Mathematics.
- Apr. 08, 2015 - Jun. 05, 2015 **Teaching Assistant** – JAIST I216: Computational Complexity and Discrete Mathematics.

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## Co-authors (in alphabetical order)

Erik D. Demaine, Martin L. Demaine, Eli Fox-Epstein, Takehiro Ito, Amanj Khorramian, Hirotaka Ono, Yota Otachi, Akira Suzuki, Ryuhei Uehara, Tsuyoshi Yagita, Takeshi Yamada.

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## Publications

A list of my publications can also be found at DBLP and Google Scholar. Some of them are available as e-prints at arXiv.

### Journal

- [1] Erik D. Demaine, Martin L. Demaine, Eli Fox-Epstein, **Duc A. Hoang**, Takehiro Ito, Hirotaka Ono, Yota Otachi, Ryuhei Uehara, and Takeshi Yamada. “Linear-time algorithm for sliding tokens on trees”. In: *Theoretical Computer Science* 600 (2015), pp. 132–142. DOI: 10.1016/j.tcs.2015.07.037.

### Refereed International Conference

- [6] **Duc A. Hoang**, Akira Suzuki, and Tsuyoshi Yagita. “Reconfiguring  $k$ -path vertex covers”. In: *Proceedings of WALCOM 2020*. Ed. by M. Sohel Rahman, Kunihiko Sadakane, and Wing-Kin Sung. Vol. 12049. LNCS. Springer, 2020, pp. 133–145. DOI: 10.1007/978-3-030-39881-1\_12.
- [5] **Duc A. Hoang**, Amanj Khorramian, and Ryuhei Uehara. “Shortest reconfiguration sequence for sliding tokens on spiders”. In: *Proceedings of CIAC 2019*. Ed. by Pinar Heggernes. Vol. 11485. LNCS. Springer, 2019, pp. 262–273. DOI: 10.1007/978-3-030-17402-6\_22.
- [4] **Duc A. Hoang**, Eli Fox-Epstein, and Ryuhei Uehara. “Sliding tokens on block graphs”. In: *Proceedings of WALCOM 2017*. Ed. by Sheung-Hung Poon, Md. Saidur Rahman, and Hsu-Chun Yen. Vol. 10167. LNCS. Springer, 2017, pp. 460–471. DOI: 10.1007/978-3-319-53925-6\_36.

- [3] **Duc A. Hoang** and Ryuhei Uehara. “Sliding tokens on a cactus”. In: *Proceedings of ISAAC 2016*. Ed. by Seok-Hee Hong. Vol. 64. LIPIcs. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2016, 37:1–37:26. DOI: 10.4230/LIPIcs.ISAAC.2016.37.
- [2] Eli Fox-Epstein, **Duc A. Hoang**, Yota Otachi, and Ryuhei Uehara. “Sliding token on bipartite permutation graphs”. In: *Proceedings of ISAAC 2015*. Ed. by Khaled Elbassioni and Kazuhisa Makino. Vol. 9472. LNCS. Springer, 2015, pp. 237–247. DOI: 10.1007/978-3-662-48971-0\_21.
- [1] Erik D. Demaine, Martin L. Demaine, Eli Fox-Epstein, **Duc A. Hoang**, Takehiro Ito, Hirotaka Ono, Yota Otachi, Ryuhei Uehara, and Takeshi Yamada. “Polynomial-time algorithm for sliding tokens on trees”. In: *Proceedings of ISAAC 2014*. Ed. by Hee-Kap Ahn and Chan-Su Shin. Vol. 8889. LNCS. Springer, 2014, pp. 389–400. DOI: 10.1007/978-3-319-13075-0\_31.

## Thesis

- [2] **Duc A. Hoang**. “Independent set reconfiguration and related problems for some restricted graphs”. PhD thesis. Japan Advanced Institute of Science and Technology, June 2018. URL: <http://hdl.handle.net/10119/15431>.
- [1] **Duc A. Hoang**. “The independent set reconfiguration problem on some restricted graphs”. MA thesis. Japan Advanced Institute of Science and Technology, Mar. 2015. URL: <http://hdl.handle.net/10119/12643>.