Naoki **KITA**

Ph.D

Assistant Professor

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Summary

I am an assistant professor at Tokyo University of Agriculture and Technology. I received my Ph.D. at Japan Advanced Institute of Science and Technology (JAIST). I received my B.S. degree in science from Kanazawa University in 2009, and my M.S. in knowledge science from JAIST in 2011. My current research interests include computational design/fabrication and human visual perception, especially in layout/arrangement for discrete elements.

Education

Japan Advanced Institute of Science and Technology (JAIST) — *Japan*

Ph.D. in Knowledge Science — *Apr. 2016 - Mar. 2019*

- Thesis: Computational Design of Discrete Element Layouts
- Advisor: Kazunori Miyata

Japan Advanced Institute of Science and Technology (JAIST) — *Japan*

M.S. in Knowledge Science — *Apr. 2009 - Mar. 2011*

- Thesis: Interactive Procedural Modeling of Pebble Mosaics
- Advisor: Kazunori Miyata

Kanazawa University — *Japan*

B.S. in Science — *Apr. 2005 - Mar. 2009*

- Advisor: Toyoko Arai

Experience

Visual Computing Laboratory, Tokyo University of Agriculture and Technology — *Japan*

Assistant Professor — *Apr. 2019 - PRESENT*

READi Design Lab, L'École de design Nantes Atlantique — *France*

Visiting Researcher — *Feb. 2017 - Nov. 2017*

- Joined IDEA (Immersive Data Exploration & Analysis) project and developed immersive VR applications.

JAIST-DNIC (Dependable Network Innovation Center) — *Japan*

Project Researcher — *Aug. 2013 - Mar. 2016*

- Developed a skill map for CYDER (CYber Defense Exercise with Recurrence) project hosted by Ministry of Internal Affairs and Communications.

Kanazawa Medical University — *Japan*

Collaborative Researcher — *Apr. 2011 - Mar. 2016*

- Developed an NRBCs (Nucleated Red Blood Cell) autodetect system for non-invasive fetal DNA diagnosis from maternal blood.

Allied Telesis Research Institute, Ltd. *Japan*

Software Engineer *Feb. 2015 - Oct. 2015*

- Developed an in-house web service on Scala/Play Framework.
- Developed an e-learning system on Moodle and a cyber security lecture course.

JAIST (Japan Advanced Institute of Science and Technology) *Japan*

Research Assistant *Apr. 2012 - Mar. 2013*

IPA MITOH Program *Japan*

Project Leader *Feb. 2012 - Aug. 2012*

- Funded for half a year as a project leader of an exploratory IT Human Resources Project (THE MITOH Program), and developed a discrete element texture generation application.

Publications

International Journals

N. Kita, K. Miyata, "Computational Design of Polyomino Puzzles", The Visual Computer, Vol.37, No.4, pp.777–787, 2021.

N. Kita and T. Saito, "Computational Design of Generalized Centrifugal Puzzles", Computers & Graphics, Vol.90, pp.21–28, 2020.

N. Kita, Grégoire Cliquet, and K. Miyata, "Mapping Two-Dimensional Plots to a Spherical Surface using Elliptical Grid Mapping", Graphical Models, Vol.109, 101067, 2020.

M. Mardani, H. Mardani, L.-D. Simone, S. Varas, N. Kita, and T. Saito, "Integration of Machine Learning and Open Access Geospatial Data for Land Cover Mapping", Remote Sensing, Vol.11, No.16, 1907, 2019.

N. Kita and K. Miyata, "Magic sheets: Visual cryptography with common shares", Computational Visual Media, Vol.4, No.2, pp.185–195, 2018.

N. Kita and K. Miyata, "Aesthetic Rating and Color Suggestion for Color Palettes", Computer Graphics Forum, Vol.35, No.7, pp.127–136, 2016.

N. Kita and K. Miyata, "Multi-class anisotropic blue noise sampling for discrete element pattern generation", The Visual Computer, Vol.32, No.6, pp.1035–1044, 2016.

International Conferences (Peer-reviewed)

N. Kita, S. Kawasaki, and T. Saito, "Palette-based Image Search with Color Weights", ACM SIGGRAPH Asia 2022 Posters, ACM SA ' 22, Article 9, pp.9:1–9:2, December 2022.

N. Kita, S. Tsukii, and M. Tsuru, "Procedural Modeling of Crystal Clusters", ACM SIGGRAPH Asia 2022 Posters, ACM SA ' 22, Article 23, pp.23:1–23:2, December 2022.

S. Tamaoki, N. Kita, and T. Saito, "Semantics-Aware Color Palette Generation for Graphic Designs", The 7th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2021), September 2021.

N. Kita, K. Miyata, and T. Saito, "Computational Design of Polyomino Puzzles", Computer Graphics International (CGI 2020), Geneva, Switzerland (October 2020).

N. Kita, Grégoire Cliquet, and K. Miyata, "Mapping Two-Dimensional Plots to a Spherical Surface using Elliptical Grid Mapping", CVM 2020, Macau, China (September 2020).

N. Kita and T. Saito, "Computational Design of Generalized Centrifugal Puzzles", Shape Modeling International (SMI 2020), Strasbourg, France (June 2020).

C. Sato, N. Kita, and T. Saito, "Generating Route Panoramas for Street Guide Maps", The 6th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2019), Bali, Indonesia (August 2019).

H. Watai, N. Kita, and T. Saito, “Two-Dimensional Flow Field Visualization Using Hierarchical Poisson Disk Sampling”, The 6th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2019), Bali, Indonesia (August 2019).

M. Iwasaki, N. Kita, and T. Saito, “Natural Extension Method of Video Length”, The 6th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2019), Bali, Indonesia (August 2019).

M. Tanimizu, N. Kita, and T. Saito, “Production Support of Resin Works Using Computer Graphics”, The 6th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2019), Bali, Indonesia (August 2019).

M. Mardani, N. Kita, and T. Saito, “Application of Deep Learning and Open Access Geospatial Cloud Processing Platforms in Land Cover Mapping”, The 6th IIEEJ International Conference on Image Electronics and Visual Computing (IEVC 2019), Bali, Indonesia (August 2019).

N. Kita and K. Miyata, “Magic Sheet: Visual Cryptography with Common shares”, CVM 2018, Shanghai, China (April 2018).

N. Kita and K. Miyata, “Cube Art”, ACM SIGGRAPH Asia 2016 Posters, ACM SA’16, Article 30, pp.30:1-30:1, Macau (December 2016).

N. Kita and K. Miyata, “Aesthetic Rating and Color Suggestion for Color Palettes”, Pacific Graphics (PG 2016), Okinawa, Japan (October 2016).

N. Kita and K. Miyata, “Multi-class anisotropic blue noise sampling for discrete element pattern generation”, Computer Graphics International (CGI 2016), Heraklion, Crete, Greece (June 2016).

N. Kita and K. Miyata, “Interactive Procedural Modeling of Pebble Mosaics”, ACM SIGGRAPH Asia 2011 Sketches, ACM SA’11, Article 35, pp.35:1–35:2, Hong Kong, China (December 2011).

N. Kita and K. Miyata, “A rule-based method for generating bookshelf models”, ACM SIGGRAPH Asia 2010 Posters, ACM SA’10, Article 36, pp.36:1-36:2, Seoul, Korea (December 2010).

K. Ishibashi, T. Da Luz, R. Eynard, N. Kita, N, Jiang, H. Segi, K. Terada, K. Fujita and K. Miyata, “Spider Hero”, Laval Virtual Revolution 2010, An.3, Laval, France (April 2010).

K. Ishibashi, T. Da Luz, R. Eynard, N. Kita, N, Jiang, H. Segi, K. Terada, K. Fujita and K. Miyata, “Spider Hero: A VR application using pulling force feedback system”, VRCAI 2010, Session 7, Tokyo, Japan (December 2009).

Honors & Awards

Nov 2022	**NICOGRAPH Award**, NICOGRAPH 2022
Nov 2022	**Outstanding Paper Award (short papers)**, NICOGRAPH 2022
Jun 2021	**Outstanding Research Presentation Award**, Visual Computing 2020 (VC2020)
Mar 2019	**Outstanding Performance Award in the doctoral program**, JAIST
Feb 2018	**Excellent Poster Award**, JAIST World Conference 2018
Mar 2016	**Outstanding Poster Award**, JAIST HLD International Symposium 2016
Mar 2011	**Outstanding Performance Award in the master program**, JAIST
Mar 2011	**Best Paper Award**, 10th NICOGRAPH Spring
Feb 2010	**Campus Genius Award SILVER (Interactive)**, 15th Campus Genius Award

Fundings

Apr 2020 - Mar 2023	**JSPS KAKENHI Grant Number 20K19944**, Japan Society for the Promotion of Science
Aug 2019 - Mar 2021	**JSPS KAKENHI Grant Number 19K24338**, Japan Society for the Promotion of Science
Jul 2018 - Mar 2019	**JAIST Research Grant (Fundamental Research) 2018**, Japan Advanced Institute of Science and Technology
Apr 2017 - Mar 2019	**JSPS Young Research Fellowship (DC2)**, Japan Society for the Promotion of Science
Feb 2017 - Nov 2017	**JAIST Grant for Off-Campus Research**, Japan Advanced Institute of Science and Technology
Apr 2016 - Mar 2017	**JAIST Doctral Research Fellowship (DRF)**, Japan Advanced Institute of Science and Technology
Feb 2012 - Aug 2012	**The Exploratory IT Human Resources Project (THE MITOH Program)**, Information Technology Promotion Agency Japan

Skills

Programming Python, C++, JavaScript
Languages Japanese (Native), English (Intermediate)