

KATSUMOTO Yuichiro

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PROFILE

KATSUMOTO Yuichiro is a Japanese gadget creator based in Singapore. He keeps inventing new electronic gadgets that are time related since 2005. Currently, he works for the Smart Systems Institute (formerly known as Interactive & Digital Media Institute), National University of Singapore in R&D for digital devices.

His early work, Amagatana (2006–2009), which was created by focusing on spare time in our daily lives, won the encouragement award at the 10th Japan Media Art Festival Entertainment Division. This work was exhibited at FILE 2007 Games, Ars Electronica Festival 2007, ACM Multimedia 2007 Art Exhibition, ACM SIGGRAPH Asia 2008 Art Gallery, and several galleries.

After moving to Singapore in 2010, he started a project "Phase Transition-ish Apparatus (PTA)" aimed at inventing various types of toys inspired by phase transition phenomena. Ninja Track (2011–2013), one of the examples of PTA, is the novel interface which is able to change its shape and flexibility. PTA won the excellence prize in the 15th Japan Media Arts Festival, and the game called ReelBlade which uses Ninja Track as a game controller also won the best technological award in Sense of Wonder Night at the Tokyo Game Show in 2015.

In 2013, he started a new project, "Robot Anime Reversal", and created Dancer-in-a-Box (2013–2015) and Mojigen & Sujigen (2016–).

EDUCATION

Ph.D. in Media and Governance Keio University Graduate School of Media and Governance, Japan Ph.D. thesis: "Creation of StandbyCE"	Sep. 2006 - Jul. 2010
M.S. in Media and Governance Keio University Graduate School of Media and Governance, Japan M.S. thesis: "Design of Digital Entertainment that uses Scents"	Apr. 2004 - Mar. 2006
B.S. in Environmental Information Keio University, Japan Major: Broadcasting and Cinematography	Apr. 2000 - Mar. 2004

WORK EXPERIENCE

Senior Research Fellow Smart Systems Institute ¹ , National University of Singapore	Jan. 2014 - Present
Deputy Director of Design Keio-NUS CUTE Center, National University of Singapore	Jan. 2014 - Jul. 2016
Research Fellow Interactive & Digital Media Institute, National University of Singapore	Dec. 2010 - Dec. 2013
Researcher Keio Research Institute at KMD	Apr. 2013 - Mar. 2017 Apr. 2010 - Mar. 2011
Teaching Assistant Shonan Institute of Technology	Apr. 2007 - Mar. 2010
Research Assistant For JST/CREST Ubiquitous Content Project	Oct. 2006 - Mar. 2010

¹ Smart Systems Institute is formerly known as Interactive & Digital Media Institute till April 2017.

Researcher
Keio Research Institute at SFC

Apr. 2006 - Mar. 2007

AWARD **International Award**

Excellence Award, Asia Digital Art Award 2016, Interactive Arts Div. "Mojigen"	Dec. 2016
Emerging Technologies Best Demo voted by Attendees, ACM SIGGRAPH Asia 2016 "Bottomless Joystick"	Dec. 2016
Award for Best 3D Object, WIRED presents Creative Hack Award 2016 "Robot Anime Reversal: Mojigen and Sujigen"	Nov. 2016
Finalist Award, Asia Digital Art Award 2015, Entertainment Div. "ReelBlade"	Nov. 2015
Best Technological Game Award, Tokyo Game Show SOWN ² 2015 "ReelBlade"	Sep. 2015
Emerging Technologies Prize, ACM SIGGRAPH Asia 2012 "ASIBO"	Dec. 2012
The 2nd Prize, James Dyson Award 2012 Japan Regional Judging "Ninja Track"	Nov. 2012
The 5th Prize, James Dyson Award 2012 Japan Regional Judging "Catapy"	Nov. 2012
Excellence Prize, the 15th Japan Media Arts Festival, Entertainment Div. "Phase Transition-ish Apparatus ³ "	Feb. 2012
Silver Award, ACE 2011 Creative Showcase & Interactive Art "Catapy"	Nov. 2011
Finalist, Laval Virtual Award 2008 "Amagatana + Fula"	Apr. 2008
Encouragement Prize, the 10th Japan Media Arts Festival, Entertainment Div. "Amagatana"	Feb. 2007
Prize of Art and Culture, Laval Virtual Award 2006 "InScene"	Apr. 2006
Domestic Award	
Maker of Merit, Singapore Maker Faire 2017 (Singapore) "Mojigen"	July 2017
The Society for Art and Science Encouragement Prize, EC 2011 (Japan) "Catapy"	Oct. 2011
Best Presentation Award, EC 2009 (Japan) "Amagatana: Case Study of Design Methodology for Ubiquitous Content"	Sep. 2009

² SOWN = Sense of Wonder Night (Indie Game Award in Tokyo Game Show)

³ incl. Ninja Track and Catapy

Gizmodo Japan Award, WISH 2009 hosted by Agile Media Network (Japan) “xtel inside”	Aug. 2009
Keio University President’s Encouragement Award (Japan) My fruits of works were collectively evaluated by the president.	Mar. 2007
Keio University Shonan Fujisawa Campus Student Award (Japan) Our research project “SENSE” was collectively evaluated by the dean.	Mar. 2006
Excellence Prize, the 5th Smart IT Design Contest (Japan) “InScene”	Mar. 2006
Finalist, the 11th Student CG Contest (Japan) “Nozoki-Hana (Peepin’ Nose in)”	Feb. 2006

PUBLICATION LIST

Academic Journal

1. Satoru Tokuhisa, Takaaki Ishizawa, Yoshimasa Niawa, Kenji Kasuya, Yuichiro Katsumoto, Shuichi Ishibashi, Satoru Hashimoto, Atsuro Ueki, Masa Inakage, “A Development Environment to Support Agile Prototyping of Ubiquitous Content”, IEICE TRANSACTIONS on Information and Systems D 93-D (10):1809-1821, 2010.
2. Yuichiro Katsumoto, Daisuke Uriu, Satoru Tokuhisa, Naohito Okude, Masa Inakage, “Design Methodology for Ubiquitous Content: Amagatana as a Case Study”, Journal of the Society for Art and Science, Vol.9 Issue 3, 2010.
3. Masa Inakage, Atsuro Ueki, Satoru Tokuhisa, Yuichiro Katsumoto, “Designing Ubiquitous Content for Daily Lifestyle”, International Journal of Cognitive Informatics and Natural Intelligence, Vol. 5, Issue 1, pp.35-40, October, 2008.

Book and Magazine

1. Michal Rinott, Eran Gal-Or, Shachar Geiger, Luka Or, Stefanie Mueller, Pedro Lopes, Konstantin Kaefer, Bastian Kruck, Patrick Baudisch, Shunichi Kasahara, Ryuma Niyama, Valentin Heun, Hiroshi Ishii, Yuichiro Katsumoto, Satoru Tokuhisa, and Masa Inakage. 2013. Demo hour. interactions 20, 6 (November 2013), 8-9.
2. Masa Inakage, Takahiro Arakawa, Kenji Iguchi, Yuichiro Katsumoto, Makoto Katsura, Takeshi Osawa, Satoru Tokuhisa, and Atsuro Ueki, “Designing for Entertaining Everyday Experiences”, In Art and Technology of Entertainment Computing and Communication, edited by A. D. Cheok: Springer, 2010.
3. Ubiquitous Content Project (collective writing), “xtel: an interaction design for making wealthy life”, AXIS, Japan, January 2010.

International Conference

1. Yuichiro Katsumoto, “Bottomless Joystick 2”, ACM SIGGRAPH 2017 Emerging Technologies, LA, USA, 30 July - 3 August, 2017.
2. Yuichiro Katsumoto, “Bottomless Joystick”, ACM SIGGRAPH Asia 2016 Emerging Technologies, Macao, 5-8 December, 2016.
3. Yuichiro Katsumoto, “One-Stroke⁴”, ACM SIGGRAPH Asia 2016 Art Gallery, Macao, 5-8 December, 2016.
4. Kentaro Yasu, Yuichiro Katsumoto, “Bump Ahead: Easy-to-design Haptic Surface using Magnet Array”, ACM SIGGRAPH Asia 2015 Emerging Technologies, Kobe, Japan, 2-5 November, 2015.
5. Yuichiro Katsumoto, “Dancer-in-a-Box”, ACM SIGGRAPH Asia 2014 Emerging Technologies, Shenzhen, China, 3-6 December, 2014.
6. Yuichiro Katsumoto, Masa Inakage, “Notori: Reviving a Worn-out Smartphone by Combining Traditional Wooden Toys with Mobile Apps”, ACM SIGGRAPH Asia 2013 Emerging Technologies, Hong Kong, 19-22 November,

⁴ One-stroke is also referred as Mojigen.

2013.

7. Yuichiro Katsumoto, Masa Inakage, "Notori: Design of Wooden Toys and Mobile Apps for Reviving a Worn-out Smartphone", ACM SIGGRAPH Asia 2013 the Symposium on Mobile Graphics and Interactive Applications, 19-22 November, 2013.
8. Yuichiro Katsumoto, Satoru Tokuhisa, Masa Inakage, "Ninja Track: Design of Electronic Toy Variable in Shape and Flexibility", TEI 2013 Paper and Demo, Barcelona, Spain, 10-13 February, 2013.
9. Yuichiro Katsumoto, Masa Inakage, "ASIBO", ACM SIGGRAPH Asia 2012 Emerging Technologies, Singapore, 28 November-1 December, 2012.
10. Yuichiro Katsumoto, Masa Inakage, "Ninja Track", ACM SIGGRAPH Asia 2011 Emerging Technologies, Hong Kong, 12-15 December, 2011.
11. Yuichiro Katsumoto, Masa Inakage, "Catapy", ACE 2011 Creative Showcase and Interactive Art, Lisbon, Portugal, 8-11 November, 2011.
12. Yuichiro Katsumoto, Masa Inakage, "Amagatana + Fula", ACM SIGGRAPH Asia 2008 Art Gallery, Singapore, 10-13 December, 2008.
13. Yuichiro Katsumoto, Masa Inakage, "Amagatana", ACM Multimedia 2007 Art Exhibition, Augsburg, Germany, 25-27 September, 2007.
14. Yuichiro Katsumoto, Erika Kanai, Nadya Kirillova, Kaori Higashi, Hokuto Miura, Takashi Matsumoto, Reiko Sasaki, Masa Inakage, "InScene: a fantastic communication device which uses incenses", ACE 2006 Demonstration, Hollywood, USA, 14-16 June, 2006.

Domestic Conference

1. Yuichiro Katsumoto, Satoru Tokuhisa, Masa Inakage, "Ninja Track: An interaction technique using a structure that can change its shape and flexibility", WISS 2011 Talk and Demo, Kyoto, Japan, 1-3 December, 2011.
2. Yuichiro Katsumoto, Masa Inakage, "Catapy", Entertainment Computing 2011 Talk, Tokyo, Japan, 7-9 October, 2011.
3. Atsuro Ueki, Shuichi Ishibashi, Takaaki Ishizawa, Daisuke Uriu, Yuichiro Katsumoto, Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "Ubiquitous Contents Platform xtel: A developing system for contents in daily life", SICE System Integration 2009, Tokyo, 24-25 December, 2009.
4. Takaaki Ishizawa, Shuichi Ishibashi, Atsuro Ueki, Daisuke Uriu, Yuichiro Katsumoto, Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "MOXA: Web integrated nodes for ubiquitous computing", SICE System Integration 2009, Tokyo, 24-25 December, 2009.
5. Sho Hashimoto, Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, Daisuke Uriu, Yuichiro Katsumoto, Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Naohito Okude and Masa Inakage, "IP and web access for small nodes using proxy system", SICE System Integration 2009, Tokyo, 24-25 December, 2009.
6. Naruhiko Shiratori, Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, Daisuke Uriu, Yuichiro Katsumoto, Yusuke Kamiyama, Sho Hashimoto, Satoru Tokuhisa, Naohito Okude and Masa Inakage, "Constructing the Life System for Storing Experience Using xtel Framework", SICE System Integration 2009, Tokyo, 24-25 December, 2009.
7. Yusuke Kamiyama, Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, Daisuke Uriu, Yuichiro Katsumoto, Naruhiko Shiratori, Sho Hashimoto, Satoru Tokuhisa, Naohito Okude and Masa Inakage, "A Report of a Practical Case of a System for Storing Experience in an Exhibition", SICE System Integration 2009, Tokyo, 24-25 December, 2009.
8. Satoru Tokuhisa, Shuichi Ishibashi, Takaaki Ishizawa, Daisuke Uriu, Atsuro Ueki, Yuichiro Katsumoto, Yusuke Kamiyama, Naruhiko Shiratori, Sho Hashimoto, Naohito Okude and Masa Inakage, "xtel: A Development Environment for Ubiquitous Content", Entertainment Computing 2009, Tokyo, 16-18 September, 2009.
9. Naruhiko Shiratori, Shuichi Ishibashi, Takaaki Ishizawa, Daisuke Uriu, Atsuro Ueki, Yuichiro Katsumoto, Yusuke Kamiyama, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "Stochastic entertainment Computing", Entertainment Computing 2009, Tokyo, 16-18 September, 2009.

10. Daisuke Uriu, Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, [Yuichiro Katsumoto](#), Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "A Design Methodology for Ubiquitous Content: Seamless Development Process using Design Thinking and xtel Platform", Entertainment Computing 2009, Tokyo, 16-18 September, 2009.
11. [Yuichiro Katsumoto](#), Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, Daisuke Uriu, Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "Amagatana: Case Study of Design Methodology for Ubiquitous Content", Entertainment Computing 2009, Tokyo, 16-18 September, 2009.
12. Shuichi Ishibashi, Takaaki Ishizawa, Atsuro Ueki, Daisuke Uriu, [Yuichiro Katsumoto](#), Yusuke Kamiyama, Naruhiko Shiratori, Satoru Tokuhisa, Sho Hashimoto, Naohito Okude and Masa Inakage, "Sound Candy: Case Study of Design Method for Ubiquitous Content", Entertainment Computing 2009, Tokyo, 16-18 September, 2009.

Art, Design, and Entertainment Exhibition

1. [Yuichiro Katsumoto](#), "Mojigen, Singapore Maker Faire 2017, Science Centre, Singapore, 22-23 July 2017.
2. [Yuichiro Katsumoto](#), "Mojigen" Asia Digital Art Award 2016 Winner Exhibition, Fukuoka Asian Art Museum, Fukuoka, Japan, 2 - 7 March, 2017.
3. Toi Ngee Tan, [Yuichiro Katsumoto](#), Kensaku Kawauichi, and Liew Feng Ming, "Wiz", Game Developers Conference 2016 Alt.Ctrl.GDC showcase, Moscone Center, San Francisco, CA, USA, 16-18 March, 2016.
4. [Project ReelBlade](#)⁵, "ReelBlade", Asia Digital Art Award 2015 Winner Exhibition, Fukuoka Asian Art Museum, Fukuoka, Japan, 25 February - 1 March, 2016.
5. [Project ReelBlade](#), "ReelBlade", Taipei Game Show 2016, Taipei World Trade Center, Taipei, Taiwan (Republic of China), 28-29 January, 2016.
6. [Project ReelBlade](#), "ReelBlade", GameStart 2015 Founders Base, Suntec Singapore Convention & Exhibition Centre, Singapore, 13-15 November, 2015.
7. [Yuichiro Katsumoto](#), "Dancer-in-a-Box", Kagoshima Art Festa 2015, Kagoshima, Japan, 30 September - 3 October, 2015.
8. [Project ReelBlade](#), "ReelBlade", Tokyo Game Show 2015 Sense of Wonder Night, Makuhari, Japan, 17-20 September, 2015.
9. [Yuichiro Katsumoto](#), "Dancer-in-a-Box", DA VINCI: SHAPING THE FUTURE, ArtScience Museum, Singapore, 15 November, 2014 - May 17, 2015.
10. [Yuichiro Katsumoto](#), "Catapy Mega", Singapore Mini Maker Faire, Senja Cashew Community Club, Singapore, 26-27 July, 2014.
11. [Yuichiro Katsumoto](#), "Phase Transition-ish Apparatus"⁶, Japan Media Arts Festival in Yamanashi 2013, Kofu, Yamanashi, Japan, 13-20 January, 2013.
12. [Yuichiro Katsumoto](#), "Amagatana", Japan Media Arts Festival in Yamanashi 2013, Kofu, Yamanashi, Japan, 13-20 January, 2013.
13. [Yuichiro Katsumoto](#), "Ninja Track and Catapy", 100% Design Singapore, Singapore, 10-12 October, 2012.
14. [Yuichiro Katsumoto](#), "Catapy", Singapore Mini Maker Faire, Singapore, 4-5 August, 2012.
15. [Yuichiro Katsumoto](#), "Phase Transition-ish Apparatus", the 15th Japan Media Arts Festival, Tokyo, Japan, 22 February - 4 March, 2012.

⁵ Project ReelBlade is a project for creating a new style of arcade game based on Ninja Track for Games. Hardware Development Team (NUS): [Yuichiro Katsumoto](#), Kensaku Kawauchi, Daniel Chua, Loh Zhide, Gabriel Chua, Ellen Yi Luen Do, Ng Teck Khim, Koh Chun Keat. Game Development Team (SUTD Game lab): Teo Chor Guan, Sandra Chan, Leong Wei Kiat, Andrew Teo, Shawn Toh, Weng Junxuan.

⁶ incl. Ninja Track , Catapy, and ASIBO

16. [Yuichiro Katsumoto](#), "Amagatana", Space Invaders, Netherlands Media Art Institute, Amsterdam, Netherlands, 28 August - 7 November, 2010.
17. [Yuichiro Katsumoto](#), "Amagatana Versus", Magical Museum Exhibition, Ohita City Museum of Art, Ohita, Japan, 16 July - 31 August, 2010.
18. [Yuichiro Katsumoto](#), "Amagatana", Space Invaders, FACT, Liverpool, United Kingdom, 18 December, 2009 - 28 February, 2010.
19. [Yuichiro Katsumoto](#), "Amagatana", Japan Media Arts Festival in HAMAMATSU 2009, Shizuoka University of Art and Culture, Hamamatsu, Japan, 30 October - 3 November, 2009.
20. [Yuichiro Katsumoto](#), "Amagatana", Japan Media Arts Festival in Vienna 2009, MQ, Vienna, Austria, 12-20 September, 2009.
21. [Yuichiro Katsumoto](#), "Amagatana", VIDEO JUEGOS: HISTORIAS LUDICAS, AVENTURAS INSOLITAS, Centro Fundacion Telefonica, Lima, Peru, 23 July - 4 October, 2009.
22. [Yuichiro Katsumoto](#), Shuichi Ishibashi, Daisuke Uriu, Naruhiko Shiratori, Masato Takahashi, Motonori Nakamura, Sho Hashimoto, Masa Inakage, "KODOU", Ars Electronica Festival 2008 Take Away (data to go), Linz, Austria, 4-9 September, 2008.
23. [Yuichiro Katsumoto](#), "Amagatana", IDC Asia, Temasek Polytechnic, Singapore, 23 January, 2008.
24. [Yuichiro Katsumoto](#), Masa Inakage, "Amagatana", Ars Electronica Festival 2007 Pixelspace, Linz, Austria, 5-11 September, 2007.
25. [Yuichiro Katsumoto](#), "Amagatana", File 2007 Games, Sao Paulo, Brazil, 13-17 August, 2007.
26. [Yuichiro Katsumoto](#), "Amagatana", the 10th Japan Media Arts Festival, Tokyo, Japan, 24 February - 4 March, 2007.

Workshop

1. [Yuichiro Katsumoto](#), Kensaku Kawauchi, Ahmad Sapon Zainuddin, "Make Your Own Circuit for Catapy type R", Playeum, Singapore, 14 and 21 October, 2 and 9 December 2015.
2. [Yuichiro Katsumoto](#), "Japan Media Arts Festival presents Making ASIBO Workshop", ACM SIGGRAPH Asia 2012 E-tech Talk, 1 December, 2012.
3. [Yuichiro Katsumoto](#), "Play with the Phase Transition-ish Apparatus", Workshop at the National Art Center, Tokyo, Japan, 3 March, 2012.
4. [Yuichiro Katsumoto](#), "Rapid prototyping for physical and social computing", Workshop at Center Foundation Telefonica, Lima, Peru, 23-24 July, 2009.

Guest Lecture & Invited Talk

1. "Playful Times, Playful Computing", Japan Creative Center, Singapore, 31 March, 2017.
2. "Electric Toys 101", Riken Singapore, Singapore, 29 September, 2014.
3. "New Entertainment Computing", Nihon University College of Art, Tokyo, Japan, 12 October, 2011.
4. "Creation of StandbyCE", Nihon University College of Art, Tokyo, Japan, 13 July, 2010.
5. "Media Frontier", Nihon University College of Art, Tokyo, Japan, 5 November, 2009.

Symposium Speaker

1. "The future of Asia by Media Arts", Asia Digital Art Award Fukuoka 2016 Symposium, Fukuoka Asian Art Museum, March 5, 2017.
2. "Project Box Run", Report for the Project to Support the Nurturing of Media Arts Creators Japan, Design Hub, Roppongi Midtown, Tokyo, Japan, 9 February, 2014.

3. "Something About Phase Transition-ish Apparatus", the 15th Japan Media Art Festival Symposium, the National Art Center, Tokyo, Japan, 26 February, 2012.
4. "Standbys", Japan Media Art Festival in Vienna 2009 Symposium, MQ, Vienna, Austria, 13 September, 2009.

PATENTS

1. Yuichiro Katsumoto, Hieaki Nii, Masa Inakage, "An Array Of Elements And A Human-Computer Interface Device (ヒューマンコンピューターインターフェイスを形成するエレメントのアレイ)", Japan Patent No. 6116573, granted on 31 March 2017.
2. Yuichiro Katsumoto, Hieaki Nii, Masa Inakage, "An Array Of Elements And A Human-Computer Interface Device", United States of America Patent No. 9,463,267, granted on 11 October 2016.
3. Yuichiro Katsumoto, Hieaki Nii, Masa Inakage, "Toy Vehicle", Singapore Patent No. 11201401624P, granted on 5 February 2016.

GRANTS

1. Yuichiro Katsumoto, Foundation for Fusion of Science and Technology Japan, April 2014 - March 2016.
2. Yuichiro Katsumoto, Project to Support the Nurturing of Media Arts Creators Japan, August 2013 - March 2014.

SERVICES

1. Co-Chair, Augmented Human 2015 Student Design Competition.
2. Jury, ACM SIGGRAPH Asia 2012 Emerging Technologies.

ABILITY

Programming

Major: Max/MSP, Arduino

Minor: Visual Basic, C/C++, Javascript, Ruby

Design

Adobe: Photoshop, Illustrator, Premiere, After Effects, Dreamweaver

Apple: Final Cut Pro, DVD Studio Pro, Soundtrack, Logic Pro

CAD: Rhinoceros

Prototyping: 3D Printer, Laser Cutter, Electrical DIY

Language

Japanese: Native

English: General professional proficiency

Korean: Elementary proficiency