

Shigeki Amitani, PhD

Work Experience

June 2009 - Present Adobe Systems Co., Ltd. Tokyo, Japan

Member of Technical Staff, Adobe Systems Platform Engineering

- Flash Player and AIR globalization
- Developing an automated system for testing features of developed software.

April 2006 - Present University of Technology, Sydney NSW, Australia

Senior Research Assistant

At Creativity & Cognition Studios (CCS, directed by Professor Ernest Edmonds), Faculty of Engineering and Information Technology, University of Technology, Sydney (UTS).

- Theme: Generative Website (Leader, 3 engineers including me)
- Goal: Finding “meaningful sequences” out of a large database of texts, video clips etc. to support audiences to create new information based on the generated ones
- Development: A web application (Flex+Java servlet) that generates “meaningful sequences” of annotated video clips out of a video database (Eclipse IDE on Mac OS X)
- Achievement: User studies statistically showed the generative website generates meaningful sequences (like “stories” or “playlists”) and let them start to create new sequences by adding new video clips and rearranging their order
- Keyword: Creativity Support, Text mining, Human-Computer Interaction, Computer Science, Knowledge Management Process, Art and Technology, Generative Systems

April 2004 – March 2006 University of Technology, Sydney NSW, Australia

Postdoctoral Fellow

At Creativity & Cognition Studios, funded by the Research Fellowship Division of Japan Society for the Promotion of Science (JSPS), following on from my PhD study at University of Tokyo.

- Theme: Designing a System to Support the Process of Making Video Sequences (collaboration with a film artist)
- Goal: Develop a “better” representation for making video sequences
- Development: A Java application with a two-dimensional representation that facilitates users (1) to provide an unstructured space to think flexibly; and (2) to do trial-and-errors freely. (Eclipse IDE on Mac OS X)
- Achievement: A user study and interview with a professional validated its effectiveness.
- Keyword: Creativity Support, Text mining, Human-Computer Interaction, Computer Science, Knowledge Management Process, Art and Technology

Qualifications

April 2001 – March 2004 University of Tokyo Tokyo, Japan

PhD

- Department of Advanced Interdisciplinary Studies
 - Focus: Creativity Support, Human-Computer Interaction, and Knowledge Management
 - Thesis: A Method and a System for Supporting the Process of Knowledge Creation
 - Supervisor: Professor Koichi HORI, Research Center for Advanced Science and Technology (RCAST), University of Tokyo, Japan
 - I led a collaborative project of 8 people (4 from an advertising company, 4 (staff and PhD candidates) from our laboratory) to develop (1) method for investigating impressions of visitors to commercial exhibitions (e.g. Tokyo Motor Show, World PC Expo, etc.); and (2) a system for analyzing obtained information for next exhibition design were developed (Java application on Eclipse IDE on Windows XP). I was a main developer.
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Shigeki Amitani

April 1998 – March 2001

University of Tokyo

Tokyo, Japan

M.S. in Information Engineering

- Department of Information Engineering
 - Focus: Creativity Support, Human-Computer Interaction, and Musical Composition
 - Thesis: Supporting Musical Composition by Externalizing the Composer's Mental Space
 - A system for supporting musical composition with a spatial representation has been developed (Java application on Eclipse IDE on Windows XP)
 - Supervisor: Professor Koichi HORI, Research Center for Advanced Science and Technology (RCAST), University of Tokyo, Japan
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July 1998 – June 1999

Norwegian University of Science and Technology

Trondheim, Norway

Visiting Scholar

- Faculty of Tele-communication
 - Focus: Musical Perception, Musical Composition
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April 1994 – March 1998

University of Tokyo

Tokyo, Japan

B.S. in Industrial Mechanical Engineering

- Department of Industrial Mechanical Engineering
 - Focus: Human-Computer Interaction, and Rehabilitation Engineering
 - Supervisor: Professor Masato TANAKA, University of Tokyo, Japan
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Skills

Programming Skills:

- 10+ year experience in Java, Perl for standalone / server-side applications
- 3 year experience in ActionScript, MXML for Flash applications
- 5 year experience in Max/MSP Visual programming language
- Knowledge in Google Android application development experience
- Knowledge in Django
- Knowledge in C/C++

Research Skills:

- Knowledge in developing and evaluating creativity support tools, including human-computer interaction, artificial intelligence, knowledge management, art and technology, cognitive science, computer science
- Knowledge in interaction design, its implementation and evaluation
- Text mining
- Natural Language Processing techniques
- Methods in cognitive science and ethnography, especially protocol analysis

Languages:

- Native Japanese
 - Fluent in English: 5-year work experience in Sydney, Australia
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Peer-Reviewed Publications

- [Journal] Shigeki Amitani, Ernest Edmonds: "A method for visualising possible contexts", International Journal of Advanced Intelligence Paradigms 2010, Vol.2, No.2/3, pp.110-124, 2010.
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- [Int'l Conf] Shigeki Amitani, Zafer Bilda, Ernest Edmonds: "Our Content: Generative Montage Methods for Multimedia Data", The Fourth International Conference on Internet and Web Applications and Services (ICIW), Venice, Italy, 24-28 May 2009.
 - [Symposium] Damian Hills, Shigeki Amitani, Ernest Edmonds: "A Data Model for Generative Context Representation - Our Content Project", paper presented to the Australasian CRC for Interaction Design Conference, QUT, Brisbane, Australia, 24th October 2008.
 - [Int'l Conf] Ernest Edmonds, Shigeki Amitani: "Shaping Forms on the Web", HCI2008 Culture, Creativity, Interaction, Liverpool John Moores University, UK, 1-5 September 2008.
 - [Invited paper] Ernest Edmonds, Shigeki Amitani: "Shaping Forms on the Web with a Collective Memory", 7th International Conference on Software Methodologies, Tools and Techniques (SoMeT 2008), American University of Sharjah, Sharjah, UAE, 15 - 17 October 2008. (to appear)
 - **[Journal] Shigeki Amitani, Zafer Bilda, Ernest Edmonds: "Our Content: Generative Methods for Montaging Multimedia Data", Design Studies, Elsevier, 2008.**
 - **[Journal] Shigeki Amitani, Ernest Edmonds: "Designing a System for Supporting the Process of Making a Video Sequence", Transdisciplinary Digital Art: Sound, Vision and the New Screen, Communication in Computer and Communication Science (CCIS), Springer, 2008.**
 - [Int'l Conf] Shigeki Amitani, Ernest Edmonds: "Generative Website: Visualising Possible Stories", VSMM'07, 23-26 September 2007, Brisbane, Australia, 2007.
 - **[Int'l Conf] Shigeki Amitani, Ernest Edmonds: "A Context Visualiser: the Generative Website Project", SIGGRAPH 2007 Sketches & Posters Program, 8-13 August, San Diego, CA, USA, 2007.**
 - [Int'l Conf] Shigeki Amitani, Ernest Edmonds: "A Method for Visualising Possible Contexts", 11th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES2007), Invited Session of Chance Discovery, 12 - 14 September, Vietri sul Mare, Italy, 2007.
 - [Int'l Conf] Shigeki Amitani, Ernest Edmonds: "Designing a System for Supporting the Process of Making a Video Sequence", Digital Art Weeks Festival'07, 9-14 July, Zurich, Switzerland, 2007.
 - [Int'l Conf] Shigeki Amitani, Ernest Edmonds: "A Dynamic Concept Base: A Component for Generative Systems", Digital Art Weeks Festival'07, 9-14 July, Zurich, Switzerland, 2007.
 - [Japanese Conf] Shigeki Amitani, Ernest Edmonds: "Algorithms for Scenario Generation Systems", The 21st Annual Conference of The Japanese Society for Artificial Intelligence (JSAI2007), 20-22 June 2007, Miyazaki, Japan, 2007.
 - [Journal] Linda Candy, Shigeki Amitani, Zafer Bilda: "Practice-Led Strategies for Interactive Art Research", CoDesign: International Journal of Co Creation in Design and the Arts, Interactive Art Collaboration (Special Edition), Vol.2 No. 4 December, pp 209-223, 2006.
 - [Journal] Zafer Bilda, Brigid Costello, Shigeki Amitani: "Collaborative analysis framework for evaluating interactive art experience", Journal of CoDesign vol. 2, #4, December 2006, Taylor and Francis, pp 225-238, 2006.
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- [Int'l Conf] Mike Leggett, Shigeki Amitani: "Hypermedia for Portable Video Players (PVP)", International Conference on Computer Graphics, Imaging and Visualization, Sydney, Australia, 25 - 28 July 2006.
- [Int'l Conf] Lizzie Muller, Brigid Costello, Shigeki Amitani: "Understanding Situated Experiences of Interactive Art System", Interactive Entertainment Conference, 23-25 November 2005, University of Technology, Sydney, Australia, 2005.
- Int'l Conf] Shigeki Amitani, Ernest Edmonds: "Knowledge Nebula Crystallizer for Time-based Information", Creativity & Cognition 5, London, 12-16 April, 2005.
- [Int'l Conf] Andrew Johnston, Shigeki Amitani, Ernest Edmonds: "Amplifying Reflective Thinking for Musical Performance", Creativity & Cognition 5, London, 12-16 April, 2005.
- [Int'l Conf] Shigeki Amitani, Koichi Hori: "A Method and a System for Supporting the Process of Chance Discovery - the process of knowledge creation in terms of Chance Discovery", Proceedings of First European Workshop on Chance Discovery at the European Conference on Artificial Intelligence, Valencia, Spain, August, 22-27, pp.62--71, 2004.
- **[PhD Dissertation] Shigeki Amitani: "A Method and a System for Supporting the Process of Knowledge Creation", PhD dissertation, University of Tokyo, 2004.**
- **[Int'l Conf] Shigeki Amitani, Mikihiro Mori, Hirohito Shibata, Hiroko Shoji, Koichi Hori: "Knowledge Nebula Crystallizer for Knowledge Liquidization & Crystallization - From a Theory to a Methodology of Knowledge Management", Expertise in Design, University of Technology, Sydney, 17 - 19 November 2003.**
- [Int'l Conf] Shigeki Amitani, Mikihiro Mori, Koichi Hori: "An Approach to the Supporting System for Event Planning - Toward a Knowledge Reconstruction Engine -", ICONIP'02-SEAL'02-FSKD'02 Abstracts, pp.208, 2002.
- [Int'l Conf] Shigeki Amitani, Mikihiro Mori, Koichi Hori: "An Approach to a Knowledge Reconstruction Engine for Supporting Event Planning", Proc. of Fall Symposium on Chance Discovery of AAAI 2002, pp.61-69, 2002.
- **[Int'l Conf] Shigeki Amitani, Koichi Hori: "Supporting Musical Composition by Externalizing the Composer's Mental Space", Proc. of Creativity & Cognition 4, pp. 165-172, at Loughborough Univ., 13-16 Oct 2002.**
- [Int'l Conf] Shigeki Amitani, Mikihiro Mori, Koichi Hori: "An Approach to a Knowledge Reconstruction Engine for Supporting Event Planning", Proc. of KES2002, Part 2, pp. 1281--1285, E. Damiani et al. (Eds.), IOS Press, 2002.

(More Japanese peer-reviewed papers. All papers available at: <http://shigekifactory.com/about>)

Collaborative Art Projects

- *Cities Tango* by Ernest Edmonds, Exhibited at Urbanscreens '08, 3 - 8 October 2008, Melbourne, Australia and Media Facade Festival in Berlin, Germany.
 - *Shaping Form* by Ernest Edmonds, exhibited at Conny Dietzschold Gallery, 2 Dank Street Galleries, Sydney, Australia, 15 September - 31 October 2007. (http://www.artnet.com/Galleries/Artists_detail.asp?G=&gid=310&which=&aid=424077646&ViewArtistBy=online&rta=http://www.artnet.com)
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- *Mandane-Trace* by Ian Gwilt, exhibited at the Beta_space, Sydney, Australia, August - September, 2007. (<http://www.betaspace.net.au/content/view/43/>)
- *Shaping Form* by Ernest Edmonds, exhibited at Speculative Data and the Creative Imaginary Shared Innovative Visions between Art and Technology, National Academy of Sciences Gallery, Washington D.C., United States, June 3 - August 24, 2007. (<http://www.cs.umd.edu/hcil/CC2007/artexhibitbiton.shtml>)
- *GEO Landscape* by Chris Bowman, exhibited at the Beta_space in the Powerhouse Museum, Sydney, Australia, 27 April – 16 June 2007. (<http://www.betaspace.net.au/content/view/39/>)

Grants Received

- Competitive Scholarship for Apple Worldwide Developers Conference 2008 awarded by Apple University Consortium, 2008.
- Postdoctoral Fellowships for Research Abroad funded by Japan Society for the Promotion Science (JSPS) for two-year research in Creativity and Cognition Studios at UTS (from 1st April 2004 to 31st March 2006)
(JSPS: Fellowships: <http://www.jsps.go.jp/english/e-fellow/fellow.html>)
- Tateishi Science and Technology Foundation for the PhD research
(Tateishi Science and Technology Foundation: <http://www.tateisi-f.org/>)

Other Academic Activities

Conference Chairs

- The Publicity Chair of the Fifth International Conference on Collaboration Technologies 2009 Sydney, Australia, August 12-14, 2009. (<http://www.collabtech.org/>)
- The Webmaster of Engage IAAE 2006 conference, University of Technology, Sydney, Australia, 26-28 November, 2006. (<http://www.creativityandcognition.com/engage06/>)
- **The Local Organisation Chair of Intelligent User Interfaces 2006, University of Technology, Sydney, Australia, 29 January – 1 February, 2006.**

Panel Discussion

- “Doing things in public: research collaborations between cultural and research organisation”, a panel discussion at Speculation and Innovation Conference 2005 - Applying Practice-Led Research in the Creative Industries - Wednesday, 30 March, 2005.

Invited Speech / Seminars

- “Designing Creativity Support Tools”, HAIL seminar series at ICT Centre of CSIRO, Tuesday 10th April 2007. (video: <http://www.ict.csiro.au/HAIL/Abstracts/2007/ShigekiAmitani.htm>)
 - “Creativity Support Research at Creativity & Cognition Studios”, at Dentsu Inc. (The largest Japanese advertising company, <http://www.dentsu.com/>), 8 August 2006.
 - “Designing Creativity Support Tool”, presentation at Human Understanding Machines group meeting at National Information and Communication Technology Australia, 29 July, 2004.
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Shigeki Amitani

Recent Research Paper Reviews

- A paper for the Interactivity session at CHI 2009
- A PhD dissertation review (before submission, March 2008)
- Design Studies (Journal, English, October 2007)
- Information Processing Society of Japan (Journal, English, May 2007)
- Knowledge-Based Systems (Journal, March 2007)
- The Institute of Electronics, Information and Communication Engineering (Journal, March 2007)
- 5 papers for Creativity & Cognition 2007 (International Conference, 13-15 June 2007, Washington D.C., US)

Referees

Professor Ernest Edmonds

- Director of the Creativity & Cognition Studios, Faculty of IT, University of Technology, Sydney, AUSTRALIA
- Postal Address: Creativity & Cognition Studios, Faculty of IT, University of Technology, Sydney, PO Box 123 Broadway, NSW 2007, AUSTRALIA
- Email: ernest@ernestedmonds.com
- Tel: +61 (0)2 9514 4640, Fax: +61 (0)2 9012 0067

Professor Koichi Hori

- Director of the Artificial Intelligence Laboratory at Research Center for Advanced Science and Technology, University of Tokyo, Japan
- Postal address: AI Laboratory, Bldg 4 room 513, Research Center for Advanced Science and Technology, University of Tokyo, 4-6-1 Komaba, Meguro-ku, Tokyo, 153-8904, JAPAN
- Email: hori@ai.rcast.u-tokyo.ac.jp
- Tel: +81 (0)3 5452 5289, Fax: +81 (0)3 5452 5312

Dr. Linda Candy

- A senior researcher in the Key Centre of Design Computing and Cognition at the University of Sydney
- Postal address: The Key Centre of Design Computing and Cognition, University of Sydney, NSW 2006, AUSTRALIA
- Email: Linda@lindacandy.com
- Tel: +61 (0)400 488 764

Others

- Black belt in Shorinji-Kempo (a kind of martial arts)
 - Bicycle enthusiast
 - Drummer
 - Coffee enthusiast
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