

## Curriculum Vitae of Tatsunori HARA

### FULL NAME:

Tatsunori HARA

### DATE OF BIRTH:

25 July 1981, Japan

### CURRENT POSITION:

Associate Professor

Human-Artifactology Division, RACE (Research into Artifacts, Center for Engineering), The University of Tokyo

### HOMEPAGE URL:

<http://haralab.race.u-tokyo.ac.jp/>

### E-MAIL:

[hara\\_tatsu@race.u-tokyo.ac.jp](mailto:hara_tatsu@race.u-tokyo.ac.jp)

### RESEARCH FIELD:

Service Engineering, Product Service Systems, Production engineering, Design engineering

### EDUCATION:

Bachelor, Dep. of System Innovation, Faculty of Engineering

**The University of Tokyo**

**2004**

Master, Dep. of Precision Engineering, Graduate School of Engineering

**The University of Tokyo**

**2006**

Doctor, Dep. of Precision Engineering, Graduate School of Engineering

**The University of Tokyo**

**2009**

### ACADEMIC DEGREE:

**Doctor of Engineering** (The University of Tokyo)

**2009**

### RESEARCH EMPLOYMENT HISTORY:

#### **Research Fellow**

The Japan Society for the Promotion of Science (JSPS)

*Service modeling, computer-aided design system for service, product-service systems*

**April 2006 – Mar. 2009**

#### **Assistant Professor**

Dept. of Precision Engineering, Graduate school of Engineering, The University of Tokyo

*Manufacturing system, process modeling, service engineering*

**April 2009 – Mar. 2011**

#### **Lecturer**

Research into Artifacts, Center for Engineering (RACE), The University of Tokyo

*Service science, tourism service, service marketing, product-service systems*

**April 2011 – Feb. 2013**

#### **Associate Professor**

Research into Artifacts, Center for Engineering (RACE), The University of Tokyo

*service design, service engineering, servitization, skill analysis of human interactions*

**March 2013 – present**



## HONORS:

- A. Dean's Doctoral Research Award, Graduate School of Engineering, The University of Tokyo 2009
- B. Kimura Literature Prize, Transdisciplinary Federation of Science and Technology, Japan 2015
- C. First prize, Geo Activity Festa, Geospatial EXPO 2014, Japan 2014

## CIRP AFFILIATION:

- Research Affiliate

## COMMITTEE AND BOARD MEMBER HISTORY:

- Program chair, 4th CIRP Conference on Industrial Product Service Systems (IPS2), Tokyo, 2012.
- Organizing committee member, 1st CIRP Conference on BioManufacturing, Tokyo, 2013.
- Publication chair, 2nd International Conference on Serviceology, Yokohama, 2014.
- Organizing committee member, 24th CIRP Conference on LCE, Kamakura, 2017.
- Organizing committee member, 68th CIRP General Assembly, Tokyo, 2018.
  
- Board member, Society for Serviceology, 2014-.
- Board member, Society for Tourism Informatics in Japan, 2014-.
  
- Chairman, investigative commission of future service science research, JST RISTEX, Japan, 2014-.
- Working group member, committee of e-Government and open government data, IT strategic headquarters, cabinet secretariat, Japan, 2015-.
- Member, investigative commission of legislation for ICT utilization, IT strategic headquarters, cabinet secretariat, Japan, 2015-.

## SPECIFIC OUTSTANDING TECHNICAL ENGINEERING ACCOMPLISHMENTS AND CONTRIBUTIONS

(1) During his Ph.D., the candidate developed a concrete design system and its software responding to the concept of service engineering proposed by Arai, Shimomura, and Ueda in CIRP. The system and software were presented in CIRP GA, LCE, MS, and IPS2 conferences. He received the prize **A**) due to his dissertation. He also received the prize **B**) for his continuing design study last year. This study developed a synthesis model of use processes, functions, and service by integrating a marketing perspective called service dominant logic and design studies such as Yoshikawa's general design theory.

(2) As with manufactured products, he has been working on tourism service based on manufacturing science since 2010, which was funded by JST service science research program in Japan. It was finally assessed as 1st among 4 projects selected in FY2010, and is now in the phase of social implementation. Through tourism research, he constructed a new design system based on an integrated view of design activities and use activities by users. This accomplishment was presented in CIRP General Assembly 2013 and service conferences and won the prize **C**. Many hints for servitization of products in manufacturing industry was obtained through the study.

(3) He is currently keen to develop a technical engineering method of servitization in manufacturing industry by integrating (2) into (1) so as to contribute to create new value to our sustainable society.

## LIST OF PUBLICATIONS

## Journal papers (with impact factor)

- [1] Yoshiki Shimomura, **Tatsunori Hara** and Tamio Arai: A Service Evaluation Method using Mathematical Methodologies. *CIRP Annals - Manufacturing Technology*, Vol. 57/1, (ISSN 1660-2773), pp. 437-440, <http://dx.doi.org/10.1016/j.cirp.2008.03.012>, 2008.
- [2] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: A CAD system for service innovation: integrated representation of function, service activity, and product behaviour. *Journal of Engineering Design*, Special issue on PSS, Vol. 20, No. 4, pp. 367-388, <http://dx.doi.org/10.1080/09544820903151715>, 2009.
- [3] **Tatsunori Hara**, Tamio Arai, Yoshiki Shimomura and Tomohiko Sakao: Service CAD System to Integrate Product Behavior and Service Activity for Total Value. *CIRP Journal of Manufacturing Science & Technology*, CIRP, Vol. 1, No. 4, pp. 262-271, (ISSN 1755-5817), <http://dx.doi.org/10.1016/j.cirpj.2009.06.002>, 2009.
- [4] Koji Kimita, Yoshiki Shimomura, **Tatsunori Hara**, Tomohiko Sakao and Tamio Arai: An Integrated Analysis of Customer Value and Environmental Burden for Environmentally Conscious Design. *International Journal of Design Engineering (IJDE)*, Special issue on: From Green Design to Eco-innovation and Sustainable Product Design, Vol. 2, No. 3, (ISSN 1751-5874 (Print) 1751-5882 (Online)), pp. 262-277, 2009.
- [5] Yoshiki Shimomura, **Tatsunori Hara** and Tamio Arai: A Unified Representation Scheme for Effective PSS Development. *CIRP Annals - Manufacturing Technology*, Vol. 58/1, (ISSN 1660-2773), pp. 379-382, 2009
- [6] Yoshiki Shimomura and **Tatsunori Hara**: Method for Supporting Conflict Resolution for Efficient PSS Development. *CIRP Annals -Manufacturing Technology*, Vol. 59/1, (ISSN 1660-2773), pp. 191-194, 2010.
- [7] **Tatsunori Hara** and Tamio Arai: Simulation of Product Lead Time in Design Customization Service for Better Customer Satisfaction. *CIRP Annals -Manufacturing Technology*, Vol. 60/1, (ISSN 1660-2773), pp. 179-182, 2011.
- [8] **Tatsunori Hara** and Tamio Arai: Encourage non-designer's design: sustainable value creation in manufacturing products and services. *CIRP Annals -Manufacturing Technology*, Vol. 61/1, (ISSN 1660-2773) , pp.171-174, 2012.
- [9] **Tatsunori Hara**, Satoshi Shimada and Tamio Arai: Design-of-use and design-in-use by customers in differentiating value creation. *CIRP Annals -Manufacturing Technology*, Vol. 62/1, (ISSN 1660-2773) , pp.103-106, 2013.
- [10] Hisato Nakanishi, Naohiro Shichijo, Masao Sugi, Taiki Ogata, **Tatsunori Hara**, and Jun Ota. Modeling the process of animation production. *International Journal of Automation Technology*, Vol. 7, No. 4, pp.439-450, 2013.
- [11] Wattanavekin, Theeraphol, Taiki Ogata, **Tatsunori Hara**, and Jun Ota. Mobile Robot Exploration by Using Environmental Boundary Information. *ISRN Robotics*, (954610), pp.1-11, 2013.
- [12] Norisuke Fujii, Taiki Ogata, **Tatsunori Hara**, Jun Ota: Realization method for a rearrangement task by multiple mobile robots in consideration of map errors. *ROBOMECH Journal* 2014, pp.1-16, 2014.
- [13] Jun Ota, Nariaki Nishino, **Tatsunori Hara**, Toyohisa Fujita: New research trends in artifactology - Modeling of individuals and socialization technology. *Synthesiology*, Vol.7, No.4, pp. 200-209, 2014.
- [14] Hiroyuki Yahagi, Shinsuke Shimizu, Taiki Ogata, **Tatsunori Hara** and Jun Ota: Simulation-based rule generation considering readability. *International Scholarly Research Notices*, 2015(159289), pp. 1-11, 2015.
- [15] **Tatsunori Hara**, Keta Sato and Tamio Arai: Modeling the transition to a provider-customer relationship in servitization for expansion of customer activity cycles. *CIRP Annals -Manufacturing Technology*, Vol. 65/1, (ISSN 1660-2773) , pp.XXX-XXX, 2016. (in press)

## Other Journal papers (including in Japanese)

- [1] Yoshiki Shimomura, **Tatsunori Hara**, Kentaro Watakabe, Tomohiko Sakao, Tamio Arai, and Tetsuo Tomiyama: Proposal of the Service Engineering : 1st Report, Service Modeling Technique for the Service Engineering. Transactions of the Japan Society of Mechanical Engineers Series C, Vol. 71, No. 702, pp.315-322, 2005 (in Japanese).
- [2] Tomohiko Sakao, **Tatsunori Hara**, Kentaro Watanabe, and Yoshiki Shimomura: Proposal of Service Engineering: 2nd Report, Service Design Methodology for Service Engineering. Transactions of the Japan Society of Mechanical Engineers Series C, Vol. 71, No. 708, pp.2614-2621, 2005 (in Japanese).
- [3] Tomohiko Sakao, **Tatsunori Hara**, Yoshiki Shimomura, and Tamio Arai: Verifying the Power of a Service CAD System to Describe Objects - A Case of Service Explorer. Journal of Japan Industrial Management Association, ISSN 1342-2618, Vol. 59, No. 4, pp. 320-329, 2008 (in Japanese).
- [4] **Tatsunori Hara**, Tamio Arai, Yoshiki Shimomura: Proposal of the Service Engineering (3rd Report, Integrating Function-Attribute Representation of Service by Introducing Service Activity. Transactions of the Japan Society of Mechanical Engineers, Series C, Vol. 4, No.745, pp.229-238, 2008 (in Japanese).
- [5] **Tatsunori Hara**, Hiroshi Kato, Tamio Arai, and Yoshiki Shimomura: Structural Analysis of Service Delivery Process from the Receiver's Point of View. Transactions of the Japan Society of Mechanical Engineers, Series C, Vol. 4, No.756, pp.2128-2135, 2009 (in Japanese).
- [6] **Tatsunori Hara**, Tsuyoshi Koga, Kazuhiro Aoyama, Yohei Kurata, Research Plan on Sophisticating Tour Services for Foreign Travelers : As a Good Subject toward Development of Research Foundation on Service Science. Tourism Science Research, Vol.4, pp.113-121, 2011 (in Japanese).
- [7] **Tatsunori Hara**, Satoshi Shimada, Tsuyoshi Koga, Kazuhiro Aoyama, Yohei Kurata, Naoto Yabe, Yoshiaki Hongo, Taketomi Asano, Makoto Kato: Toward planning support of tourism service for inbound tourists: analysis and synthesis of tourism information from the viewpoints of tourist and travel agency. Tourism and Information (Journal of Society for Tourism Informatics), Vol. 7, No. 1, pp. 29-46, 2011 (in Japanese).
- [8] Satoshi Shimada, Jun Ota, and **Tatsunori Hara**: Modeling a process of expectation construction of tourists in travel. Tourism and Information (Journal of Society for Tourism Informatics), Vol. 8, No. 1, pp. 39-50, 2012 (in Japanese).
- [9] **Tatsunori Hara**, Naoto Yabe, Kazuhiro Aoyama, Yohei Kurata, Keita Murayama, Kazuya Oizumi, Satoshi Shimada: Can Service Engineering Contribute to Tourism-oriented Nation? : Activities analysis of inbound tourists using GPS logger and that future utilization. Journal of Digital Practices, Vol.3, No.4, pp.262-271, 2012 (in Japanese).
- [10] Satoshi Shimada, Kei Taira, **Tatsunori Hara**, and Tamio Arai: Analyzing Customer Satisfaction According to Expectations Regarding Waiting Time in Service Receiving. Journal of Japan Industrial Management Association, Vol. 64, No. 3, pp.386-398, 2013 (in Japanese).
- [11] Wataru Miura, Satoshi Shimada, Taiki Ogata, Jun Ota, Tamio Arai, and **Tatsunori Hara**: Support for describing service delivery processes using collection of structure patterns of process. Transaction of the Japan Society of Mechanical Engineers, Vol. 80, No. 819, pp. 1-20, 2014 (in Japanese).
- [12] Satoshi Shimada, Yuki Nakamura, Taiki Ogata, Jun Ota, Yohei Kurata, and **Tatsunori Hara**: Development of tour planning system considering replanning in tour. Tourism and Information (Journal of Society for Tourism Informatics), Vol.11, No.1, pp.99-110, 2015 (in Japanese).

## Conference papers

- [1] **Tatsunori Hara**, Yoshiki Shimomura, Makoto Uchida and Tomohiko Sakao: Proposal of a Computerized Tool for Service Design. In Proceeding of the 8th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI 2004), Florida, pp. 374-379, 2004.
- [2] Guohui Tian, Taisuke Miura, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Framework for Service Engineering Based on Hierarchical Colored Petri nets. In Proceedings of International Conference on Machine Automation 2004 -ICMA2004-, pp. 387-392, Osaka University, Japan, 2004.
- [3] Yoshiki Shimomura, **Tatsunori Hara**, Kentaro Watanabe and Tomohiko Sakao: Service Explorer: A Service Design Tool to Create More Added Values on Products. In Proceedings of the 5th Japan Korea Workshop on CAD/CAM -Digital Engineering Workshop-, Korea Society of CAD/CAM engineers, pp. 135-141, Tokyo, 2005.
- [4] Guohui Tian, Taisuke Miura, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Framework for Optimizing and Scheduling Problems of Servicing Processes of Material Distributing Center. In Proceedings of the 5th Japan Korea Workshop on CAD/CAM -Digital Engineering Workshop-, Korea Society of CAD/CAM engineers, pp. 142-147, Tokyo, 2005.
- [5] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: A Concept of Service Engineering: A Modeling Method and a Tool for Service Design. In Proceedings of IEEE International Conference Service Systems and Service Management 2006 (SC SSSM 2006), pp. 13-17, Troyes, France, 2006.
- [6] Yohei Yoshimitsu, **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: An Evaluation Method for Service in the Point of Customers' View. In Proceedings of IEEE International Conference Service Systems and Service Management 2006 (SC SSSM 2006), pp. 7-12, Troyes, France, 2006.
- [7] Mark. I. V. Boyonas, Yohei Yoshimitsu, **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: Service Analysis for Service Design Process Formalization based on Service Engineering. In Proceedings of the 14th CIRP International Conference on Life Cycle Engineering -LCE2007-, Tokyo, Japan, CIRP, pp. 155-158, CD-ROM, 2007.
- [8] Yohei Yoshimitsu, Koji Kimita, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: Proposal of a Measuring Method of Customer's Attention and Satisfaction on Services. In Proceedings of the 14th CIRP International Conference on Life Cycle Engineering -LCE2007-, Tokyo, Japan, CIRP, pp. 417-422, CD-ROM, 2007.
- [9] Tamio Arai, Yoshiki Shimomura, **Tatsunori Hara** and Yohei Yoshimitsu: Service Engineering: a CAD system of service to evaluate satisfaction of products. In Proceedings of IEEE Joint Conference on E-Commerce Technology (CEC07) and Enterprise Computing, E-Commerce and E-Services (EEE07), Tokyo, Japan, IEEE, CD-ROM, 2007.
- [10] **Tatsunori Hara**, Tamio Arai, Yoshiki Shimomura and Tomohiko Sakao: Service/Product Engineering: a new discipline for value production. In Proceedings of the 19th International Conference on Production Research (ICPR-19), Valparaiso, Chile, CD-ROM, 2007.
- [11] **Tatsunori Hara**, Tamio Arai, Yoshiki Shimomura and Tomohiko Sakao: Service CAD System to Integrate Product Behavior and Service Activity for Total Value. In Proceedings of the 15th CIRP Life Cycle Engineering Seminar 2008, CIRP, CD-ROM, Sydney, Australia, 2008.
- [12] Koji Kimita, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: Cost Evaluation Method for Service Design Based on Activity Based Costing. In Proceedings of the 41st CIRP Conference on Manufacturing Systems, CIRP, pp. 477-480, Tokyo, Japan, 2008.
- [13] Tamio Arai, **Tatsunori Hara** and Yoshiki Shimomura: Scientific approach to services: what is the design of services?. In Proceedings of the 41st CIRP Conference on Manufacturing Systems, CIRP, pp. 25-30, Tokyo, Japan, 2008.
- [14] Koji Harada, Tamio Arai, **Tatsunori Hara** and Yoshiki Shimomura: Definition of Design Operation for Service. In Proceedings of the 41st CIRP Conference on Manufacturing Systems, CIRP, pp. 481-484, Tokyo, Japan, 2008.
- [15] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: T. Hara, T. Arai and Y. Shimomura: Integrating function model and activity model for design of service. In Proceedings of the 41st CIRP Conference on Manufacturing Systems, CIRP, pp. 531-536, Tokyo, Japan, 2008.
- [16] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: Integrated Representation of Function, Service Activity, and Product Behavior for Service Development. In Proceedings of the 13th Design for Manufacturing and the

- Life Cycle Conference - DFMLC2008 -, CD-ROM, The American Society for Mechanical Engineering (ASME), 2008.
- [17] Hiroshi Kato, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Unified Representation Scheme of Service Activity and Product. In Proceedings of XVIII International RESER Conference, CD-ROM, RESER, Stuttgart, Germany, 2008.
- [18] Shigeru Hosono, Masahiro Hasegawa, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Methodology of Persona-centric Service Design. In Proceedings of CIRP Design Conference 2009, CD-ROM, pp.541-546, CIRP, Cranfield, UK, 2009.
- [19] **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: "A Method to analyze PSS from the viewpoints of function, service activity, and product behavior". In Proceedings of CIRP IPS2 Conference 2009, CD-ROM, pp.180-185, CIRP, Cranfield, UK, 2009.
- [20] Koji Kimita, Tatsunori Hara, Yoshiki Shimomura and Tamio Arai: Cost Evaluation Method for Service Design Based on Activity Based Costing. In Proceedings of CIRP IPS2 Conference 2009, CD-ROM, pp.224-229, CIRP, Cranfield, UK, 2009.
- [21] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: A Modeling Method of Services on Their Contents and Delivery Processes. In Proceedings of the 17th International Conference on Engineering Design -ICED09-, CD-ROM, 323-332, Stanford, USA, 2009.
- [22] Shigeru Hosono, Ayako Kuno, Masahiro Hasegawa, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Framework of Co-creating Business Values for IT Services. In Proceedings of IEEE 2009 International Conference on Cloud Computing -CLOUD-II 2009-, CD-ROM, pp. 167-174, IEEE, Bangalore, India, 2009.
- [23] Shigeru Hosono, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: Prioritizing Service Functions with Non-Functional Requirements. In Proceedings of CIRP IPS2 Conference 2010, pp. 133-140, CIRP, Linköping, Sweden, 2010.
- [24] **Tatsunori Hara** and Tamio Arai: Analyzing structures of PSS types for modular design. In Proceedings of CIRP IPS2 Conference 2010, pp. 209-214, CIRP, Linköping, Sweden, 2010.
- [25] Shigeru Hosono, He Huang, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: A Lifetime Supporting Framework for Cloud Applications. In Proceedings of the 3rd International Conference on Cloud Computing - IEEE CLOUD 2010 -, CD-ROM, IEEE, Miami, U.S.A., 2010.
- [26] Keitaro Kuba, Natsuki Yamanobe, **Tatsunori Hara**, Tamio Arai and Kazuyuki Nagata: Construction of Task Instruction System for Object Retrieval Service Based on User Satisfaction. In Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, pp.5480-5485, 2010.
- [27] Satoshi Shimada, **Tatsunori Hara**, Kei Taira and Tamio Arai: Customers' satisfaction on estimates of queue waiting time in service delivery, In Proceedings of CIRP IPS2 Conference 2011, CIRP, Braunschweig, Germany, pp. 266-271, 2011.
- [28] Tsuyoshi Koga, **Tatsunori Hara**, Yoshinori Taniguchi, Kazuhiro Aoyama and Tamio Arai: Present Situation of Customer Participation in Service Design and Production-Interviewing Tour Agent, Airline, and Elevator Maintenance Company-, In Proceedings of CIRP IPS2 Conference 2011, CIRP, Braunschweig, Germany, pp. 320-325, 2011.
- [29] Shigeru Hosono, Koji Kimita, Fumiya Akasaka, **Tatsunori Hara**, Yoshiki Shimomura and Tamio Arai: Toward Establishing Design Methods for Cloud-Based Business Platforms. In Proceedings of CIRP IPS2 Conference 2011, CIRP, Braunschweig, Germany, pp. 195-200, 2011.
- [30] Shigeru Hosono, Min Min, Koji Kimita, Fumiya Akasaka, Yoshiki Shimomura, **Tatsunori Hara**, Tamio Arai: Architecture Design and Assessment with Design Matrix. In Proceedings of the 7th World Congress on Service - IEEE SERVICES 2011 -, CD-ROM, pp. 83-84, IEEE, Washington DC, U.S.A., 2011.
- [31] Kazuyoshi Aratani, Satoshi Shimada, Jun Ota, **Tatsunori Hara**: Analysis of Inbound Tourist Behaviors for Development of a Trip Planning Support System. Prep. 11th Japan-Korea Design Engineering Workshop, pp. 75-77, 2011.
- [32] Hiroyuki Yahagi, Yusuke Kariya, Masato Takehisa, **Tatsunori Hara** and Jun Ota: Designing of Taxiing Routes at Large Airport. Prep. 11th Japan-Korea Design Engineering Workshop, pp. 78-81, 2011.

- [33] Kazuyoshi Aratani, Satoshi Shimada, Jun Ota and **Tatsunori Hara**: Classification of Inbound Tourist Activities Using GPS Log Data Toward Service Innovation. Prep. 12th Japan-Korea Design Engineering Workshop, pp. 28-31, 2012.
- [34] Hiroyuki Yahagi, Yusuke Kariya, Masato Takehisa, **Tatsunori Hara** and Jun Ota: Designing Taxiways at Large Airport. Prep. 12th Japan-Korea Design Engineering Workshop, pp. 154-159, 2012.
- [35] **Tatsunori Hara**, Satoshi Shimada, Naoto Yabe, Yohei Kurata, Kazuhiro Aoyama and Yoshiaki Hongo: Value Co-Creation in Tourism: Incorporating Non-Expert's Design into Expert's Design Activities. 1st International Conference on Human Side of Service Engineering, San Francisco, USA, 2012.
- [36] Satoshi Shimada, Jun Ota and **Tatsunori Hara**: Analyzing customers expectation on service for encouraging participatory design. In Proceedings of CIRP IPS2 Conference 2012, CIRP, Tokyo, Japan, pp. 257-262, 2012.
- [37] Satoshi Shimada, Kazuyoshi Aratani, Jun Ota, and **Tatsunori Hara**: Analysis of design by customers: Customers expectation as a substitute for design knowledge, In Proceeding of CIRP IPS2 Conference 2013, CIRP, Bochum, Germany, pp. 75-84, 2013.
- [38] Satoshi Shimada, Taiki Ogata, Jun Ota, and **Tatsunori Hara**: Constructing Required Functions of Tourism Service based on Tourists' Expectancy in Trip Planning, 1st International Conference on Serviceology, Tokyo, Japan, pp. 55-60, October, 2013.
- [39] Wataru Miura, Satoshi Shimada, Taiki Ogata, Jun Ota, Tamio Arai and **Tatsunori Hara**: Support of describing service delivery processes in consideration of service function models on service CAD system, Proceedings of the 1st International Conference on Serviceology, pp. 173-178, Tokyo, Japan, 2013.
- [40] Hiroyuki Yahagi, Masato Takehisa, Shinsuke Shimizu, **Tatsunori Hara** and Jun Ota: Simulation-based simple and robust rule generation for motion coordination of multi-agent system, Proceedings of the 2013 IEEE International Conference on Systems, Man, and Cybernetics, pp. 421- 426, Manchester, United Kingdom, 2013. (October, 2013)
- [41] Motoyuki Ozaki, Toshimitsu Higashi, **Tatsunori Hara** and Jun Ota: Design of warehouse including temporary storage using queuing network theory, Proceedings of the 2013 IEEE International Conference on Systems, Man, and Cybernetics, pp. 1247- 1252. Manchester, United Kingdom, 2013.
- [42] Yohei Kurata and **Tatsunori Hara**: CT-Planner4: Toward a More User-Friendly Interactive Day-Tour Planner, ENTER 2014 (Information and Communication Technologies in Tourism 2014), pp. 73-86, Dublin, Ireland, 2014.
- [43] Satoshi Shimada, Taiki Ogata, Jun Ota, **Tatsunori Hara**, and Yohei Kurata: A support for design of use in consideration of use phase, Proceeding of 13th International Design Conference, pp. 995-1004, Dubrovnik, Croatia, 2014.
- [44] **Tatsunori Hara**, Yohei Kurata, and Kazuhiro Aoyama: Iced Rosetta: a Framework and Design Technologies to Consolidate Value Co-creation, The Proceedings of 2014 Frontiers in Service Conference, pp.14-15, 2014. Miami, USA.
- [45] Hiroya Daimaru, Satoshi Shimada, Shinsuke Shimizu, Jun Ota, and **Tatsunori Hara**: Evaluation of taxiing at a large airport considering customer satisfaction, Proceedings of the 2nd International Conference on Serviceology, pp. 28-33, Yokohama, Japan, 2014.
- [46] Yuki Wakisaka, Yuya Yamamoto, Jun Ota, and **Tatsunori Hara**: Design of Service Ecosystem based on Interactive Design Support in the case of Job-hunting Support Services, The 3rd International Conference on Serviceology, San Jose, California, United States, 7-9 July 2015.
- [47] **Tatsunori Hara** and Tamio Arai: An Interactive Model for the Synthesis of Service Functions through Use Processes, The 3rd International Conference on Serviceology, San Jose, California, United States, 7-9 July 2015.
- [48] Yohei Kurata, Yasushi Shinagawa, **Tatsunori Hara**: CT-Planner5: a computer-aided tour planning service which profits both tourists and destinations, Proceedings of the Workshop on Tourism Recommender Systems in 9th ACM Conference on Recommender Systems (RecSys 2015), pp. 35-42, Vienna, Austria, 20 September 2015.

### Workshops and Seminars

- [1] **Tatsunori Hara**, Tamio Arai and Yoshiki Shimomura: Service CAD system to Integrate Product Behavior and Service Activity for Total Value, 2nd National Workshop on Functional Products -Development and Sales, Lulea University of Technology / Vinnova, 2007.
- [2] **Tatsunori Hara**: Practical Tools for Analyzing Customer Perspective - METI Service Engineering Project (1). In Proceedings of the International Seminar on Service Engineering in Tokyo, SPRING, 2008.
- [3] **Tatsunori Hara**: Introduction to Service Engineering - a modeling method and CAD tool for service, EDC Seminar, University of Cambridge, 2010.
- [4] **Tatsunori Hara**: Activities toward next service science program in JST Japan, What Next for Services? Revisiting the Cambridge IBM Service Science White Paper, Cambridge, UK, 2015.

### Patent

- [1] Axiomatic service design method device and program, JP 5651895 B2.
- [2] Application architecture design method, application architecture design system, and recording medium, US 2014223410 A1.

### Dissertation

- [1] **Tatsunori Hara**, Integrated representation of service function and its delivery process, The University of Tokyo, 2009.

### Book editor

- [1] Takashi Maeno, Yuriko Sawatani and **Tatsunori Hara**: Serviceology for Designing the Future: Comprises selections from the proceedings of the Second International Conference on Serviceology (ICServ2014), Springer, 2016 (in press).