
Contents

Part I Service Innovation & Design

1	A New Service Class Scheme for Service Innovation in Japanese Automation Industry	3
	Yoshitaka Yuki, Seiichi Kawata, Hiroyuki Imanari, Takeo Suzuki, Norio Aburatani, Motomi Kohata, Takeru Kawai, Tomio Makino, Yukiyo Akisada, and Motoya Tametani	
2	Design of Service Ecosystem Based on Interactive Design Support in the Case of Job-Hunting Support Services	11
	Yuki Wakisaka, Yuya Yamamoto, Jun Ota, and Tatsunori Hara	
3	A Method for Supporting Customer Model Construction: Using a Topic Model for Public Service Design	19
	Satoshi Mizoguchi, Takatoshi Ishii, Yutaro Nemoto, Maiko Kaneda, Atsuko Bando, Toshiyuki Nakamura, and Yoshiki Shimomura	
4	A Proposal of the Emotion Hierarchy Diagram for Designing the Service Processes	27
	Nanami Shimazaki, Yasuharu Nishi, and Michiko Tsubaki	
5	A Creed for Service Designers	39
	Stephen K. Kwan and Yutaka Yamauchi	
6	Design Support System for Sightseeing Tours	45
	Jun Hirota, Kazuya Oizumi, Toshiki Mizushima, Tatsunori Hara, and Kazuhiro Aoyama	
7	Service Data Model in Design Support System for Sightseeing Tours	55
	Toshiki Mizushima, Jun Hirota, Kazuya Oizumi, and Kazuhiro Aoyama	
8	Design of a Localized Science Education Program for Cultivating an Intergenerational Community	65
	Kinuko Iizawa, Koki Kusano, Eri Inoue, and Naohiko Kohtake	
9	How to Generate Sustainable Services?	71
	Adi Wolfson and Dorith Tavor	
10	Service Innovation for Reducing Food Adulteration Problem in Bangladesh . . .	79
	Iffat Tasnim Haque and Youji Kohda	
11	Challenges to Deploy Service Design in Organizations: Analysis Through “Scaling Up” Workshops	89
	Fumiya Akasaka, Takehiko Ohno, and Mika Yasuoka	
12	Generalized Service Process Expressed by Context-Free Grammar	99
	Fumihiro Maruyama	

- 13 Realization of Mobility as a Service in View of Ambient Intelligence 111**
Hideyuki Nakashima, Keiji Hirata, and Junichi Ochiai

Part II Smart Service Systems

- 14 Customer Experience in Traditional and Modern Retail Formats:
A Case Study of Vietnam 119**
Nhung Tran Thi Tuyet and Yoshinori Hara
- 15 A Combinatorial Auction-Based Approach to Staff Shift Scheduling
in Restaurant Business 131**
Nobutada Fujii, Jumpei Oda, Toshiya Kaihara, and Takeshi Shimmura
- 16 Enhancing Kitchen Layout and Training to Improve Management
and Employee Satisfaction at a Multiproduct Japanese Cuisine Restaurant . . . 139**
Takeshi Shimmura, Toshihumi Takahashi, Syuichi Oura, Tomoyuki Asakawa,
Toshiya Kaihara, Nobutada Fujii, and Tomomi Nonaka
- 17 The Efficient Provision of Culture-Sensitive Services: A Modularization
Approach 147**
Andreas Janson, Christoph Peters, and Jan Marco Leimeister
- 18 Nurse Bed Care Activity Analysis for Intelligent Training Service 159**
Xiaorui Qiao, Junki Nakagawa, Koshiro Yanai, Junko Yasuda, Wen Wen,
Atsushi Yamashita, and Hajime Asama
- 19 An Evolving Service System in Microfinance: A Case Study in BRAC,
Bangladesh 169**
Md. Abul Kalam Siddike, Youji Kohda, and Monirul Hoque

Part III Service Marketing

- 20 Developing an Ad Hoc Questionnaire Model for Extracting
Consumer Behaviour in Service Encounter 183**
Hisashi Masuda and Yoshinori Hara
- 21 Building a Conceptual Preference Model Based on Personal Purchase
Records for Retail Service Improvement 197**
Marina Fujita, Wei Wenpeng, Toshiko Aizono, and Koji Ara
- 22 Are Superior Services Always Good for Satisfaction Formation?
Consideration of Indebtedness to a Contact Person 207**
Takahiro Chiba
- 23 An Analysis of Key Factors of the “Omotenashi Consumption”
in Restaurants 213**
Hiroyuki Miyai and Chizuru Nishio
- 24 Structural Equation Modeling of Purchase Funnel 221**
Naotada Yamamoto

Part IV Human Factors and Service Engineering

- 25 Toward Sports Training Service with the Interactive Learning Platform 231**
Hiroyuki Okamoto, Alessandro Moro, Atsushi Yamashita, and Hajime Asama
- 26 VR|ServE: A Software Toolset for Service Engineering Using Virtual
Reality 237**
Philipp Westner and Sibylle Hermann

27	Productivity Improvement and Stress Reduction by Showing Information to a Surveillance Worker	245
	Mitsunari Uozumi, Kouichi Yamada, Shuto Murai, Hajime Asama, and Kaoru Takakusaki	
28	Skill Evaluation and Education Services for Bed-Care Nursing with Sliding Sheet with Regression Analysis	253
	Wen Wen, Xiaorui Qiao, Koshiro Yanai, Junki Nakagawa, Junko Yasuda, Atsushi Yamashita, and Hajime Asama	
29	Kizkey Is the Key to a Better Care Service	261
	Ryoko Fukuda, Atsushi Shinjo, Masahiro Kudo, Yutaro Ono, and Jun Murai	
30	Role of Servicing Activity Visualization in Quality Control Circle	269
	Takashi Okuma, Tomohiro Fukuhara, Ryosuke Ichikari, Ching-Tzun Chang, Luis Carlos Manrique Ruiz, Takeshi Shinmura, and Takeshi Kurata	
31	Physiological Detection of Satisfaction for Services by Body Motion Wave Revealing Unconscious Responses Reflecting Activities of Autonomic Nervous Systems	279
	Hiroaki Okawai and Mitsuru Takashima	
32	The Effects of Waiting Time, Length of Stay, and Hospital Remodeling on the Structure of Patient Satisfaction	287
	Masumi Okuda, Akira Yasuda, and Shusaku Tsumoto	
33	Service Satisfaction and Consciousness-Attitude Gap for Foreign Tourists Visiting Japan	299
	Kenju Akai, Kohei Yamashita, and Nariaki Nishino	
Part V Theoretical Perspectives on Service		
34	Service as Artifact: Reconsideration of Value Cocreation	307
	Kanji Ueda, Takeshi Takenaka, and Nariaki Nishino	
35	Development of Conceptual Framework for Value Cocreation of Service Based on the Japanese Governmental Service Science Research Program . . .	317
	Teruyasu Murakami	
36	An Interactive Model for the Synthesis of Service Functions Through Use Processes	329
	Tatsunori Hara, Tamio Arai, and Aman Gupta	
37	Statistical Estimation of Software Quality in Hospital Information System . .	341
	Shusaku Tsumoto, Shoji Hirano, and Toshihiko Kawamura	
38	A Consideration of the Pricing Structure of Aesthetic Services: An Example of Consumer Decision Making with Ambiguous Information	351
	Ryoko Wada	
Part VI Social Problems in Service		
39	Designing New Business Development Program Based on Systems Engineering Methodology with Participatory Systems Analysis in Small and Midsized Enterprise	359
	Yoshikazu Tomita, Kyoko Watanabe, and Takashi Maeno	

40	Qualitative Simulation for Early-Stage Service Design	369
	Yoshiki Morishita, Fumika Murakami, Koji Kimita, Shigeru Hosono, Sayaka Izukura, Hiroshi Sakaki, Eriko Numata, and Yoshiki Shimomura	
41	Impacts of Seasonal Factors on Travel Behavior: Basic Analysis of GPS Trajectory Data for 8 Months	377
	Masahiro Araki, Ryo Kanamori, Lei Gong, and Takayuki Morikawa	
42	Collaborative Innovation Centers (CICs): Toward Smart Service System Design	385
	Qiqing (Christine) Ouyang, Jim Spohrer, Juan Caraballo, Dale Davis, Stephen Perelgut, Marcellus Mindel, Hisham El-Shishiny, and Seshadri Subbanna	
43	Dispersed Energy Storage and Its Effect on Market Efficiency in Electricity Trading with Distributed Power Resources: An Experimental Economics Study	393
	Sangjic Lee, Ryuichi Uda, Kenju Akai, and Nariaki Nishino	