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[Service Systems Lab](#)

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EDUCATION

Pohang University of Science and Technology (POSTECH), Republic of Korea

- Ph.D. in Industrial and Management Engineering, February 2014
Advisor: [Prof. Kwang-Jae Kim](#)
- B.S. in Industrial and Management Engineering, February 2009

ACADEMIC POSITIONS

School of Management Engineering, UNIST, Republic of Korea

- Assistant Professor, March 2017 – Present

School of Engineering, University of California, Merced, CA, USA

- Assistant Project Scientist & Lecturer, September 2015 – February 2017
Advisor: [Prof. Paul Maglio](#)

Department of Industrial and Management Engineering, POSTECH, Republic of Korea

- Postdoctoral Researcher & Military-service-exempted Researcher, February 2014 – August 2015
Advisor: Prof. Kwang-Jae Kim

RESEARCH INTERESTS

- Topics: Smart service systems, Service systems engineering and management, and Decision science
- Methods: Analytics of numerical and text data, Action research project with industry and government

RESEARCH GRANTS

- “Development of a Smart Factory Evaluation Method”, Hyundai Motor Group, March 2019 – November 2019.
- “Establishment of the Center for Maritime Data Science”, Ulsan Port Authority, January 2019 – December 2021.
- “Development of a Hospital System Optimization Platform: Operating Room Scheduling and Outpatient Service Process Optimization, Pusan National University Hospital”, November 2018 – March 2019

- “Structural Analysis on the Processes of Technological Innovation in the Fourth Industrial Revolution”, National Research Foundation of Korea, July 2018 – June 2021.
- “Definition of a Blockchain-based Smart Service System Architecture and Development of a Blockchain-based Service Design Method,” National Research Foundation of Korea, June 2018 – May 2020.
- “Identification of the Key R&D Issues for Convergence at Industry 4.0: A Text Mining Approach,” Korea Institute of Science and Technology, June 2018 – September 2018.
- “Connecting Service Design and Data Analytics through Action Research: Development of a Service-oriented Data Analytics Methodology,” National Research Foundation of Korea, May 2018 – April 2020.
- “Design of a Mental Health Management Service Model for College Students”, Korea Health Industry Development Institute, May 2018 – January 2019.
- “Blockchain-based System Engineering”, UNIST, February 2018 – December 2019.
- “Development of Data Analytics Methods to Identify the Sources of Odor”, Ulsan Industry-University Convergence Campus, October 2017 – March 2018.
- “A Study on the Servitization at Industry 4.0 through Intensive Collaboration with Local Industry,” National Research Foundation of Korea, March 2017 – February 2019.
- “Understanding Research and Application Areas in Industry 4.0 through Text Mining and Expert Interviews,” UNIST, March 2017 – February 2018.
- “Development and Application of Methods and an Intelligent Platform System for Industry 4.0”, UNIST, February 2017 – December 2017.
- “Development of a Visualization-mediated Interactive Product-Service System Evaluation and Design Method,” National Research Foundation of Korea, May 2014 – April 2016.

REFEREED JOURNAL PAPERS

1. Lee, C., Lee, D. and **Lim, C.**, “Toward a Unified Understanding of Blockchain Applications: A Data-driven Approach,” *ACM Computing Surveys*, To be Submitted, 2019.
2. Lee, C., **Lim, C.**, “Semi-automatic Selection of Semantically Significant Word Features for Effective and Efficient Text Summarization,” *Information Sciences*, To be Submitted, 2019.
3. **Lim, C.**, Kim, K., Kim, M., Kim, K. and Maglio, P., “Service-oriented Data Analytics: Connecting Data Analytics to Value Creation through Decision Support Service System Design,” *Telematics and Informatics*, To be Submitted, 2019.
4. Breidbach, C., Keating, B. and **Lim, C.** (All authors contributed equally to the publication and have been listed in alphabetical order), “Fintech as a Platform for Value Co-Creation: Research Directions to Explore the Microfoundations of Digital Financial Service” *Journal of Service Theory and Practice*, Under Review (2nd Round), 2019.
5. **Lim, C.**, Kim, M., Kim, K., Kim, K. and Maglio, P., “Customer Process Management: A Framework for Using Customer-related Data to Create Customer Value,” *Journal of Service Management*, Vol. 30, No. 1, 105-131, 2019.

6. **Lim, C.**, Kim, K., Kim, M. and Kim, K., “Multi-Factor Service Design: Identification and Consideration of Multiple Factors of the Service in its Design Process,” *Service Business*, Vol. 13, No. 1, 51-74, 2019.
7. Kim, M., **Lim, C.** and Kim, K., “A Data-Driven Approach To Designing New Services For Vehicle Operations Management,” *International Journal of Industrial Engineering*, Vol. 25, No. 5, 604-619, 2018.
8. Heo, J., **Lim, C.** and Kim, K., “A Customer-oriented Model of Product-Service System Lifecycle,” *International Journal of Product Lifecycle Management*, In Press, 2018.
9. Kim, K., **Lim, C.**, Kim, K., Kang, S., You, H., Jun, C., Shin, S., Choo, D. and Kim, J., “Development of Service Concepts that Utilize Health-related Data: A Case Study with the National Health Insurance Service of South Korea,” *IISE Transactions on Healthcare Systems Engineering*, Vol. 8, No. 4, 237-249, 2018.
10. Kim, K., Kim, K., **Lim, C.** and Heo, J., “Development of a Lifelogs-based Daily Wellness Score to Advance a Smart Wellness Service,” *Service Science*, Vol. 10, No. 4, 408-422, 2018.
11. Breidbach, C., Choi, S., Ellway, B., Keating, B., Kormusheva, K., Kowalkowski, C., **Lim, C.** and Maglio, P. (All authors contributed equally to the publication and have been listed in alphabetical order), “Operating without operations: How is technology changing the role of the firm?” *Journal of Service Management*, Vol. 29, No. 5, 809-833, 2018.
12. **Lim, C.**, Kim, K. and Maglio, P., “Smart Cities with Big Data: Models, Challenges, and Considerations,” *Cities*, Vol. 82, 86-99, 2018.
13. **Lim, C.** and Maglio, P., “Data-driven Understanding of Smart Service Systems through Text Mining,” *Service Science*, Vol. 10, No. 2, 154-180, 2018.
14. **Lim, C.**, Kim, K., Kim, M., Heo, J., Kim, K. and Maglio, P., “Nine Factor Framework for Analyzing and Designing Data-based Value Creation in Information-intensive Services,” *International Journal of Information Management*, Vol. 39, 121-135, 2018.
15. **Lim, C.**, Kim, M., Kim, K., Kim, K. and Maglio, P., “Using Data to Advance Service: Managerial Issues and Theoretical Implications from Action Research,” *Journal of Service Theory and Practice*, Vol. 28, No. 1, 99-128, 2018.
16. **Lim, C.** and Kim, K., “Experience Design Board: A Tool for Visualizing and Designing Experience-centric Service Delivery Processes,” *Journal of Retailing and Consumer Services*, Vol. 45, 142-151, 2018.
17. Kim, M., **Lim, C.**, Lee, C., Kim, K., Park, Y. and Choi, S., “Approach to Service Design Based on Customer Behavior Data: A Case Study on Eco-driving Service Design Using Bus Drivers’ Behavior Data,” *Service Business*, Vol. 12, No. 1, 203-227, 2018.
18. Lim, J., Choi, S., **Lim, C.** and Kim, K., “SAO-based Semantic Mining of Patents for Semi-automatic Construction of a Customer Job Map,” *Sustainability*, Vol. 9, No. 8, 1386, 2017.
19. Heo, J., **Lim, C.** and Kim, K., “Scales for Measuring Mobile Service Quality (m-SQ): A Literature Review and Identification of Key Dimensions,” *International Journal of Services and Operations Management*, Vol. 27, No. 4, 2017.

20. Kim, K., **Lim, C.**, Heo, J., Lee, D., Hong, Y. and Park, K., “An Evaluation Scheme for Product-Service System Models: Development of Evaluation Criteria and Case Studies,” *Service Business*, Vol. 10, No. 3, 507-530, 2016.
21. Maglio, P. and **Lim, C.**, “Innovation and Big Data in Smart Service Systems,” *Journal of Innovation Management*, Vol. 4, No. 1, 11-21, 2016.
22. **Lim, C.**, Kim, M., Heo, J. and Kim, K., “Design of Informatics-based Services in Manufacturing Industries: Case Studies Using Large Vehicle-related Databases,” *Journal of Intelligent Manufacturing*, Online First, 2015.
23. **Lim, C.** and Kim, K., “IT-enabled Information-Intensive Services,” *IT Professional*, Vol. 17, No. 2, 26-32, 2015.
24. Kim, M., **Lim, C.**, Lee, C., Kim, K., Jun, J. and Park, Y., “Identifying Service Opportunities for Enhancing Driving Safety of Intra-City Buses based on Driving Behavior Analysis,” *Journal of Korean Institute of Industrial Engineers*, Vol. 41, No. 5, 499-510, 2015.
25. **Lim, C.** and Kim, K., “Information Service Blueprint: A Service Blueprinting Framework for Information-Intensive Services,” *Service Science*, Vol. 6, No. 4, 296-312, 2014.
26. **Lim, C.**, Kim, K., Hong, Y. and Park, K., “PSS Board: A Structured Tool for Product-Service System Process Visualization,” *Journal of Cleaner Production*, Vol. 37, 42-53, 2012.
27. Kim, K., **Lim, C.**, Lee, D., Lee, J., Hong, Y. and Park, K., “A Concept Generation Support System for Product-Service System Development,” *Service Science*, Vol. 4, No. 4, 349-364, 2012.
28. Kim, K., Hong, Y., Park, K., **Lim, C.**, Heo, J., Kang, C., Baek, M. and Park, G., “Product-Service System: Current Status and Research Issues,” *Journal of Korean Institute of Industrial Engineers*, Vol. 37, No. 3, 234-247, 2011.

REFEREED CONFERENCE PAPERS

1. Lee, C., Lee, G. and **Lim, C.**, “Toward a Context-aware Serendipitous Recommendation System,” *Proceedings of 2018 INFORMS International Conference on Service Science*, Phonex, Arizona, USA, November 3, 2018.
2. **Lim, C.**, Kim, K., Kim, M., Kim, K. and Maglio, P., “Service-oriented Data Analytics: Connecting Data Analytics to Value Creation through Decision Support Smart Service Design,” *Proceedings of 2018 SERVSIG*, Paris, France, June 14-16, 2018.
3. **Lim, C.** and Maglio, P., “Toward a Unified Model of Service Systems,” *Proceedings of 8th International Research Symposium in Service Management*, Seoul, Korea, August 1-5, 2017.
4. Kim, K., Kim, K., **Lim, C.**, Heo, J., Lee, D., and Kim, M. “Analysis of Quality Attributes in an mHealth Behavior Monitoring Service for College Students,” *Proceedings of International Research Conference on Systems Engineering and Management Science 2017*, Xian, China, April 21-22, 2017.
5. **Lim, C.**, Maglio, P., Kim, M., Kim, K. and Kim, K., “Data-driven Customer Process Management: A New Paradigm for Co-Creating Value with Customer Data,” *Proceedings of 2016 AMA SERVSIG*, Maastricht, The Netherlands, June 17-19, 2016.

6. **Lim, C.**, Maglio, P., Kim, K., Kim, M. and Kim, K., "Toward Smarter Service Systems through Service-oriented Data Analytics," *Proceedings of 2016 IEEE International Conference on Industrial Informatics*, Poitiers, France, July 18-21, 2016.
7. **Lim, C.** and Maglio, P., "Toward a Unified Understanding of Smart Service Systems," *Proceedings of the 25th Annual Frontiers in Service Conference*, Bergen, Norway, June 23-26, 2016.
8. Kim, M., **Lim, C.**, Lee, C., Kim, K., Jeon, J. and Park, Y., "Data-driven Approach to New Service Concept Design," *Proceedings of IESS 2016*, Bucharest, Romania, May 25-27, 2016.
9. Maglio, P. and **Lim, C.**, "Some Thoughts on How Institutions and Technologies can Encapsulate and Automate Activities to Facilitate and Enhance Value Cocreation," *Proceedings of 2016 Forum on Markets and Marketing*, Venice, Italy, June 13-16, 2016.
10. Kim, K., **Lim, C.**, Heo, J., Kwon, R., Kim, M., Kim, K. and Lee, C., "System Informatics-based New Service Development: A Framework and a Case Study," *Proceedings of the Asia Pacific Industrial Engineering & Management Systems Conference*, Hochiminh, Vietnam, December 8-11, 2015.
11. Kim, K., **Lim, C.** and Kim, K., "Systematic Identification of Process Parameters Related to a Quality Dimension for Information-Intensive Service: A Case Study on IPTV service," *Proceedings of the 14th Korea-China Quality Symposium*, Jeju, Korea, August 20-22, 2015.
12. **Lim, C.**, Kim, M., Heo, J. and Kim, K., "A Conceptual Framework for Designing Informatics-based Services in Manufacturing Industries," *Procedia CIRP*, Vol. 30, 72-77, Saint-Etienne, France, May 21-22, 2015.
13. Kim, M., **Lim, C.**, Lee, C., Kim, K., Jeon, J. and Park, Y., "Identifying Service Opportunities for Enhancing the Driving Safety of Buses: A Data-driven Approach," *Proceedings of IRC-SEMS 2015*, Wuhan, China, March 27-28, 2015.
14. **Lim, C.** and Kim, K., "Product-Service System Development Methods and Knowhow: A Review and Classification," *Proceedings of the Asia Pacific Industrial Engineering & Management Systems Conference*, Jeju, Korea, October 12-15, 2014.
15. Kim, M., Lee, C., **Lim, C.**, Kim, K., Jeon, J., Choi, K. and Park, Y., "A Data-Driven Approach to Developing Service Concepts for Driving Safety Enhancement," *Proceedings of the Asia Pacific Industrial Engineering & Management Systems Conference*, Jeju, Korea, October 12-15, 2014.
16. Kim, K., **Lim, C.**, Heo, J., Lee, D., Hong, Y. and Park, K., "An Evaluation Scheme for Product-Service System Models," *Proceedings of CIRP Conference on Life Cycle Engineering 2013*, Orchard Hotel, Singapore, April 17-19, 2013.
17. Kim, K., Lee, D., **Lim, C.**, Heo, J., Hong, Y. and Park, K., "Development of an Evaluation Scheme for Product-Service Systems," *Proceedings of CIRP Conference on Industrial Product-Service Systems 2011*, Braunschweig, Germany, May 5-6, 2011.
18. Kim, K., **Lim, C.**, Lee, J., Lee, D., Hong, Y. and Park, K., "Generation of Concepts for Product-Service System," *Proceedings of CIRP Conference on Industrial Product-Service Systems 2010*, Linkoping, Sweden, April 14-15, 2010.
19. Kim, K., **Lim, C.**, Lee, J., Lee, D., Hong, Y. and Park, K., "Ideation Support System for Product-Service System Development," *Proceedings of Asia Pacific Industrial Engineering & Management Systems Conference*, Kitakyushu, Japan, pp. 311-318, December 14-16, 2009.

AWARDS

- **Lim, C.**, Kim, M., Kim, K., Kim, K. and Maglio, P., “Using Data to Advance Service: Managerial Issues and Theoretical Implications from Action Research,” Best Paper in JSTP for the 2018 Literati Awards for Excellence, April 16, 2019.
- **Lim, C.**, “2018 UNIST Outstanding Faculty Award,” UNIST, March 25, 2019.
- **Lim, C.** and Lee, C., “Data-driven Understanding of Industry 4.0 through Text Mining,” Best Work of the KIST CRPC Fellowship, Award from the Minister of Science and ICT, November 21, 2018.
- **Lim, C.** and Maglio, P., “Data-driven Understanding of Smart Service Systems through Text Mining,” Finalist, INFORMS Service Science Cluster Best Paper Competition, Houston, TX, USA, October 22-25, 2017.
- **Lim, C.** and Maglio, P., “Toward a Unified Model of Service Systems,” Highly Commended Award, International Research Symposium in Service Management, Seoul, Korea, August 1-5, 2017.
- Kim, K., Kim, K., **Lim, C.**, Heo, J., Lee, D., and Kim, M. “Analysis of Quality Attributes in an mHealth Behavior Monitoring Service for College Students,” Best Student Paper, International Research Conference on Systems Engineering and Management Science, Xian, China, April 21-22, 2017.
- **Lim, C.**, Maglio, P., Kim, M., Kim, K. and Kim, K., “Data-driven Customer Process Management: A New Paradigm for Co-Creating Value with Customer Data,” Best Paper, AMA SERVSIG, 2016.
- Kim, M., **Lim, C.**, Lee, C., Kim, K., Jeon, J. and Park, Y., “Identifying Service Opportunities for Enhancing the Driving Safety of Buses: A Data-driven Approach,” Best Student Paper, International Research Conference on Systems Engineering and Management Science (IRC-SEMS), 2015.
- Kim, K., **Lim, C.**, Lee, J., Lee, D., Hong, Y. and Park, K., “Ideation Support System for Product-Service System Development,” Best Paper, Asia Pacific Industrial Engineering & Management Systems, Kitakyushu, Japan, December 14-16, 2009.

INTERNATIONAL CONFERENCE PRESENTATIONS

- INFORMS Annual Meeting, Phonex, AZ, USA, 2018.
- International Research Symposium in Service Management, Ljubljana, Slovenia, 2018.
- SERVSIG, Paris, France, 2018.
- International Research Symposium in Service Management, Seoul, Korea, 2017.
- QUIS, Porto, Portugal, 2017.
- IEEE International Conference on Industrial Informatics, Poitiers, France, 2016.
- AMA SERVSIG, Maastricht, The Netherlands, 2016.
- INFORMS Annual Meeting, Philadelphia, PA, USA, 2015.
- CIRP Conference on Industrial Product-Service Systems, Saint-Etienne, France, 2015.
- INFORMS Annual Meeting, San Francisco, CA, USA, 2014.
- Asia Pacific Industrial Engineering & Management Systems Conference, Jeju, Korea, 2014.

- INFORMS Annual Meeting, Minneapolis, MN, USA, 2013.
- INFORMS Annual Meeting, Phoenix, AZ, USA, 2012.
- International Conference of Supply Chain and Operations Management, Seoul, Korea, 2012.
- INFORMS Annual Meeting, Charlotte, NC, USA, 2011.
- IIE Asian Conference 2011, Shanghai, China, 2011.
- INFORMS Annual Meeting, Austin, TX, USA, 2010.
- Asia Pacific Industrial Engineering & Management Systems Conference, Kitakyushu, Japan, 2009.

TEACHING EXPERIENCE

- Service Systems Engineering and Management, School of Management Engineering, UNIST, 2018
- Operations Research II, School of Management Engineering, UNIST, 2017, 2018
- Operations Management, School of Management Engineering, UNIST, 2017, 2018
- Service Innovation, School of Engineering, University of California, Merced, 2016
- Service Quality Engineering, Guest Lecturer for Service Blueprinting, POSTECH, 2013
- Quality Engineering, Guest Lecturer for Statistical Process Control, POSTECH, 2012, 2013
- Systems Engineering, TA for Prof. Kwang-Jae Kim, POSTECH, 2011
- Advanced Topics in Quality Engineering, TA for Prof. Kwang-Jae Kim, POSTECH, 2009
- Quality Engineering, TA for Prof. Kwang-Jae Kim, POSTECH, 2009

PROFESSIONAL ACTIVITIES AND SERVICE

Research Collaborations with Industry and Government Partners

- Korea Transportation Safety Authority, April 2013 – July 2015
- National Health Insurance Service, April 2014 – November 2014
- KT, June 2012 – December 2012
- KIA Motors, January 2012 – April 2012

Ad Hoc Reviewer

- Omega, INFORMS Service Science, International Journal of Operations & Production Management, Journal of Service Management, IEEE IT Professional, IEEE International Conference on Industrial Informatics, International Journal of Industrial Engineering, Hawaii International Conference on System Sciences (HICSS), Information Systems Journal, International Conference on Information Systems

PERSONAL INFORMATION

- Date of Birth: December 10, 1986
- Computational Skills: Python, R, Matlab, and SAS

- Extracurricular Experience: Traveling Around the World (2006 – 2007) and Canada (2003 – 2004)

REFERENCES

Prof. Kwang-Jae Kim

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