



Service Science

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Call for Papers: Special Issue on Service Engineering: Data-Driven Service Design and Optimization

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Call for Papers: Special Issue on Service Engineering: Data-Driven Service Design and Optimization

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Modern data analytics and data-mining techniques have opened new opportunities for optimizing service operations and enhancing customer experiences. These opportunities cover a broad range of organizations' activities, from its core activities on marketing, operations, and finance to supporting activities such as human resources, product development, and information systems. For example, applications of data-driven financing models include the use of data and analytics to inform financial decision making.

This special issue of *Service Science* aims to present recent progress on research on management analytics and data-driven decision making in the service industry. With advancements in service engineering, over the last decade, this industry has gathered large amounts of data from various sources, such as customer interactions, sales transactions, and social media activity. We are interested in work that uses these and other sources of data to design and optimize services and their delivery, such as developing algorithms to identify patterns, trends, and insights that can be used to optimize managerial decisions.

We are particularly interested in papers that address, but are not limited to, the following topics:

- **Service design:** Data and its processing facilitate modern business models such as sharing or platform operations. How can data improve resource usage and welfare in these businesses?
- **Service optimization:** Using data to set optimal capacity or design systems that maximize efficiency, reduce wait times, and improve resource allocation across various service industries. How can data be used to set optimal service capacity and design systems that maximize efficiency, reduce wait times, and improve resource allocation across various touchpoints?

- **Enhanced customer experience:** Analytics can help service businesses to better understand their customers' needs and preferences, leading to more personalized and effective ongoing and new services and improved tailored service recommendations.

- **Information technology in support of service:** Data can support the automatic creation, monitoring, and management of business processes, for example, via highlighting automation opportunities or enhancing the usage of digital twins.

- **Adoption of advanced information technology in services:** Modern information technology and algorithms can support services, for example, in high-frequency trading, and AI in support of diagnostics in healthcare, but their adoption often faces difficulties. How can these difficulties be overcome?

- **Usage of on-line data:** Access to real-time data provides businesses with insights into their performance, allowing them to make informed decisions on their operational, tactical, and strategic initiatives.

- **Applications of AI&ML:** Recent algorithms, such as LLM, can overhaul business management, for example, by improving customer support. How could service business use AI&ML to improve productivity?

- **Improved risk management in services:** By analyzing historical data and identifying potential risks, service businesses can make informed decisions about lending, investing, credit rating, and other financial activities.

The special issue will solicit original research papers that explore the various aspects of design and implementation of data-driven algorithms for descriptive, predictive, comparative, and prescriptive analytics in services science. Papers can use analytical, empirical, experimental, or qualitative methods. This special issue

highlights the cross-disciplined nature of service science through usage of data in management analytics for services. We welcome submissions from researchers and practitioners working in academia, industry, or government agencies.

Authors who are considering whether their research projects fit the scope of the special issue are encouraged to email a brief description (no more than one page) of their project to the special issue editors. This initial interaction is intended to provide feedback on the relevance of the projects to the goals of the special issue. Although this step does not evaluate the quality of the research, it does serve to ensure alignment with the themes of the special issue. The quality and appropriateness of full submissions will be determined through a peer review process involving both the existing *Service Science* Editorial Board and additional experts as needed.

There is no obligation to submit a project description before submitting a full paper, but it is an available option for authors seeking preliminary feedback.

Submission Process and Timeline

All submissions should be submitted via the *Service Science* online submission system: <https://mc.manuscriptcentral.com/serv>. All submissions will be subject to the journal's standard peer review process. Criteria for acceptance include originality, contribution, and scientific merit. For submission guidelines, please visit the journal's home page to learn more: <https://pubsonline.informs.org/page/serv/submission-guidelines>.

The estimated timeline of this special issue is as follows:

- Submissions will be accepted starting on February 1, 2025.
- Deadline for submission: October 1, 2025.
- First-round decision and feedback: January 15, 2026.
- Second-round submission (for those papers invited to revise): August 1, 2026.
- Final decisions (subject to minor revisions): November 1, 2026.

We look forward to receiving your submissions and advancing the discourse of service engineering and its impact on service design and optimization.