Operational Research: Methods and Applications

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The *Journal of the Operational Research Society (JORS)*, formerly known as *Operational Research Quarterly*, is the leading journal of the Operational Research Society in the United Kingdom. It is the oldest OR journal worldwide, and the year 2024 marks its 75th anniversary. To celebrate this occasion, we have proposed to the editors of JORS to edit an encyclopedic article on the state of the art in operational research, and our offer was warmly accepted. To this end, we have identified the main methodological and application areas to be included, based on topics covered in the major OR journals and scientific conferences. We have also contacted experts in the respective areas who have responded enthusiastically.

The end-product is a 195-page article, including 2,196 references and covering 24 methodological areas as well as 32 fields of application. The article is written by 82 authors representing 79 institutions worldwide.

The methodological areas include the major mathematical programming branches, covering deterministic, dynamic and stochastic optimization, as well as complexity theory, heuristics, artificial intelligence, risk analysis, decision theory, game theory, data envelopment analysis, systems theory, queueing, simulation, forecasting, soft OR and problem structuring, and behavioral OR.

The application areas include transportation, logistics, location and supply chain management, project management, manufacturing and inventory management, E-commerce, service industries, healthcare, energy and natural resources, environment and sustainability, telecommunications, government and public sector, military and homeland security, finance and revenue management, education, sports, timetabling, and open-source software.

This is an open-source article, due to appear as a stand-alone issue of JORS in March 2024.