

Press release

FIZ Karlsruhe – Leibniz-Institut für Informationsinfrastruktur GmbH

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Scientific Publications, Transfer of Science or Research
Economics / business administration, Information technology, Mathematics
transregional, national



Knowledge Management in Mathematics – New publication

FIZ Karlsruhe presents new information brochure “A Focus on Mathematics”. Articles span the bridge from the beginnings of mathematical documentation to today’s mathematical online portal zbMATH with new functionality for intuitive and highly precise searching and the world’s most comprehensive coverage.

Karlsruhe, December 2014. FIZ Karlsruhe — Leibniz Institute for Information Infrastructure presents its completely revised information brochure “A Focus on Mathematics”. The publication is dedicated to new directions of integrated knowledge management in mathematics.

Seven articles by expert authors, among them Prof. Gert-Martin Greuel, who is also editor-in-chief of zbMATH, span the bridge from the beginnings of the documentation of scientific results in the "Jahrbuch der Fortschritte der Mathematik" (1868) to today’s mathematical online portal zbMATH. On its foundation in 1977, the editorial departments of “Zentralblatt der Mathematik” and “Zentralblatt für die Didaktik der Mathematik” became part of FIZ Karlsruhe thus forming the basis for zbMATH.

Sabine Brünger-Weilandt, President and CEO of FIZ Karlsruhe, emphasizes: “Mathematics is essential for innovations and developments in all sciences, economy and industry. For instance, the methods and procedures of any kind of software are based on mathematical knowledge. “Therefore”, she continues “access to high-quality mathematical literature is more important than ever to support technical progress.”

Prof. Greuel explains: “The need to document mathematical publications keeps to be important, but the publication landscape evolves and is becoming more and more heterogeneous. To get an overview of the published information modern methodologies like semantics, formula search and the record of other data types like mathematical software are essential. For the latter purpose, the new database swMATH was developed. It allows for searches for mathematical software and links it directly to relevant publications in zbMATH, the world’s largest information system in mathematics.”

The new brochure presents not only FIZ Karlsruhe’s service spectrum in mathematics, but also briefly describes the history of zbMATH developing from printed annual volumes in the “Jahrbuch über die Fortschritte der Mathematik” to one of the world’s most modern multifaceted database. It comprises currently 3,4 million publications and is updated daily.

The contributions compare the publication landscapes in the past with today’s scenery where not only literature plays a vital role. They discuss the way in which reference services and online portals will have to develop to meet the needs of the users today.

Moreover, the reader learns how author profile pages in zbMATH are built up and what can be derived from it. Another important topic is the formula search. The new publication describes the efforts of FIZ Karlsruhe in this complex field to

further this sophisticated retrieval matter.

Last but not least the publication takes a closer look on some clichés about mathematicians. Are mathematicians smarter than other people? Are mathematicians unsocial? Just how much truth is in these widespread prejudices? Also, is it possible to derive design principles for the development of mathematical information systems from such an analysis so that mathematicians will get the maximum benefit out of it?

The revised brochure "A Focus on Mathematics" (pdf) is available for free download at:
<http://www.fiz-karlsruhe.de/publications.html>

The printed brochure can be ordered free of charge by sending an e-mail to „[ruediger.mack\(at\)fiz-karlsruhe\(dot\)de](mailto:ruediger.mack(at)fiz-karlsruhe(dot)de)”.

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FIZ Karlsruhe – Leibniz Institute for Information Infrastructure is a non-profit corporation and the largest non-university institution for information infrastructure in Germany. Our mission is to supply scientists and companies with professional research and patent information as well as to develop innovative information services. FIZ Karlsruhe strives to strengthen the transfer of knowledge in Germany and abroad and to support the promotion of innovation. FIZ Karlsruhe is a member of the Leibniz Association, which comprises almost 90 institutions involved in research activities and/or the development of scientific infrastructure. Learn more by visiting us at www.fiz-karlsruhe.de, and follow us on Twitter (@fiznews).

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