



**Qian Li:** male, born in January 1981, a deputy research librarian and a master's tutor. He is currently the director of the Information Systems Department of the National Science Library of Chinese Academy of Sciences (NSL, CAS), and a member of the Chinese Academy of Sciences Youth Innovation Promotion Association. In 2008, he graduated from the School of Information Engineering of Capital Normal University with a master's degree, the direction is computer application technology. He graduated from the University of Chinese Academy of Sciences in 2016 with a Ph.D., and his research interests are big data technology and intelligent information processing. He has undertaken research work on various projects of the Ministry of Science and Technology, the Chinese

Academy of Sciences, and the National Science Library of CAS, and has published more than 30 academic papers. The related research on "Semantic Knowledge Recognition of the Research and Design Process of Scientific Papers" has achieved the expected results, and has formed a set of methods for knowledge discovery and technology mining, knowledge organization and storage. At present, he is presiding over the "13th Five-Year Plan" breakthrough project-literature information "data lake" and open big data framework construction, "distributed big data knowledge resource system technical support and service platform construction", "multi-platform mobile service system construction" and the "science and technology topic generation robot research" of the Science and Technology Commission of the Military Commission; He participated in the national key research and development plan project "Chemical bond energy data reorganization and database construction", and is responsible for the development of intelligent identification tools for chemical bond energy science knowledge; He also led the design and construction of big data analysis of the literature and intelligence service platform, integrating the big data support platform, the big data aggregation platform, the big data computing platform, the big data discovery platform and the big data analysis tool system, effectively managing the massive data of literature and intelligence, quickly supporting the needs of research and development of scientific and technological innovation services.

**The main research direction** is big data technology and intelligent information processing. In the big data environment, with the rapid development of network information technology, especially intelligent information processing, cloud computing, semantic web and social network, Under the background of rapid growth and continuous outbreak of open source information represented by network technology information and literature data represented by scientific papers, it plays an important role in information technology support for scientific and technological innovation and industrial economic development that how to use the big data technology theory method system to realize distributed storage of document intelligence data, knowledge calculation and data mining, automatic description of knowledge network and construction of big data intelligence service, for example, knowledge identification and discovery of novel technical methods, effective technical tools, and evolutionary development of technical methods. In particular, the technical direction of big data distributed storage, high-performance intelligent computing, semantic annotation, knowledge organization, intelligent retrieval, knowledge visualization, etc. has important practical significance in practice and application facing service areas such as knowledge services, intelligence decision research, industrial technology analysis and forecasting, and shoulders the great mission of the core engine of industrial economic development and major technological innovation. The research direction focuses on the research and application of big data collection and analysis, big data storage and intelligent information processing technology research, knowledge mining of solutions for scientific papers, knowledge organization system construction, new media application technology, etc.

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