

1. Record Nr.	UNISA996418266203316
Titolo	Encyclopedia of Big Data Technologies [[electronic resource] /] / edited by Sherif Sakr, Albert Zomaya
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-319-63962-5
Descrizione fisica	1 online resource (1600 p. 100 illus.)
Disciplina	005.7
Soggetti	Big data Computers Big Data Information Systems and Communication Service Big Data/Analytics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>The Encyclopedia of Big Data Technologies provides IT professionals, educators, researchers and students with a comprehensive set of definitions covering the most relevant Big Data technologies. The encyclopedia articles will be authored by a worldwide subject matter experts in industry and academia, this unique publication, in multiple volumes, covers a wide range of Big Data topics. The editorial board of the encyclopedia consists of 35 well-respected scholars. The sections are designed to capture the most relevant terms and assigned to experts that develop articles in a consistent and standardized way. This extensive reference work answers the need for solid and comprehensive research source in the domain of big data technologies. The encyclopedia will not be focused only on one discipline, research area or one type of data. It will cover all related technical disciplines for big data technologies such as big data storage systems, NoSQL database, cloud computing, distributed systems, machine learning and social technologies. In particular, this encyclopedia will provide comprehensive reading materials for a large range of audiences and</p>

has potential to influence readers to think further and investigate the area that are novel to them. Editorial Board: Sherif Sakr (Editor-in-Chief), Institute of Computer Science, University of Tartu, Tartu, Estonia Albert Y. Zomaya (Editor-in-Chief), School of Information Technologies, Sydney University, Sydney, Australia Pramod Bhatotia, School of Informatics, University of Edinburgh, Edinburgh, UK Rodrigo N. Calheiros, School of Computing, Engineering and Mathematics, Western Sydney University, Penrith, NSW, Australia Aamir Cheema, Monash University, Australia Jinjun Chen, School of Software and Electrical Engineering, Swinburne University of Technology, Hawthorn, VIC, Australia Philippe Cudré-Mauroux, eXascale Infolab, University of Fribourg, Fribourg, Switzerland Marcos Dias de Assuncao, Inria, LIP, ENS Lyon, Lyon, France Marlon Dumas, Institute of Computer Science, University of Tartu, Tartu, Estonia Paolo Ferragina, Department of Computer Science, University of Pisa, Pisa, Italy George Fletcher, Technische Universiteit Eindhoven, Eindhoven, Netherlands Olaf Hartig, Linköping University, Linköping, Sweden Bingsheng He, National University of Singapore, Singapore Asterios Katsifodimos, TU Delft, Delft, Netherlands Alessandro Margara, Politecnico di Milano, Milano, Italy Kamran Munir, Computer Science and Creative Technologies, University of the West of England, Bristol, UK Behrooz Parhami, Department of Electrical and Computer Engineering, University of California, Santa Barbara, CA, USA Antonio Pescapè, Department of Electrical Engineering and Information Technology, University of Napoli Federico II, Napoli, Italy Meikel Poess, Server Technologies, Oracle, Redwood Shores, California, United States Deepak Puthal, Faculty of Engineering and Information Technologies, School of Electrical and Data Engineering, University of Technology Sydney, Ultimo, NSW, Australia Tilmann Rabl, Technische Universität Berlin, Database Systems and Information Management Group, Berlin, Germany Mohammad Sadoghi, University of California, Davis, CA, USA Timos Sellis, Swinburne University of Technology, Data Science Research Institute, Hawthorn, Victoria, Australia Domenico Talia, University of Calabria, Italy Maik Thiele, Database Systems Group, Technische Universität Dresden, Dresden, Saxony, Germany Yuanyuan Tian, IBM Almaden Research Center, SAN JOSE, CA, United States Paolo Trunfio, University of Calabria, DIMES, Rende, Italy Hannes Voigt, Dresden Database Systems Group, Technische Universität Dresden, Dresden, Germany Matthias Weidlich, Humboldt-Universität zu Berlin, Department of Computer Science, Berlin, Germany Fatma Özcan, IBM Research – Almaden, San Jose, CA, USA Sherif Sakr is the Head of Data Systems Group at the Institute of Computer Science, University of Tartu. He received his PhD degree in Computer and Information Science from Konstanz University, Germany in 2007. He received his BSc and MSc degrees in Computer Science from the Information Systems department at the Faculty of Computers and Information in Cairo University, Egypt, in 2000 and 2003 respectively. During his career, Prof. Sakr held appointments in several international and reputable organizations including University of New South Wales, Macquarie University, Data61/CSIRO, Microsoft Research, Nokia Bell Labs and King Saud bin Abdulaziz University for Health Sciences. Prof. Sakr's research interest is data and information management in general, particularly in big data processing systems, big data analytics, data science and big data management in cloud computing platforms. Prof. Sakr has published more than 100 refereed research publications in international journals and conferences such as: Proceedings of the VLDB endowment (PVLDB), IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS), IEEE Transactions on Service Computing (IEEE TSC), IEEE Transactions on Big

Data (IEEE TBD), ACM Computing Survey (ACM CSUR), Journal of Computer, Systems and Science (JCSS), Information Systems, Cluster Computing, Grid Computing, IEEE Communications Surveys and Tutorials (IEEE COMST), IEEE Software, Scientometrics, VLDB, SIGMOD, ICDE, EDBT, WWW, CIKM, ISWC, BPM, ER, ICWS, ICSOC, IEEE SCC, IEEE Cloud, TPCTC, DASFAA, ICPE and JCDL. Prof. Sakr Co-authored 5 books and Co-Edited 3 other books in the areas of data and information management and processing. Sherif is an associate editor of the cluster computing journal and Transactions on Large-Scale Data and Knowledge-Centered Systems (TLDKS). He is also an editorial board member of many reputable international journals. Prof. Sakr is an ACM Senior Member and an IEEE Senior Member. In 2017, he has been appointed to serve as an ACM Distinguished Speaker and as an IEEE Distinguished Speaker. For more information, please visit his personal web page (<http://kodu.ut.ee/~sagr/>) and his research group page (<http://bigdata.cs.ut.ee/>)

Albert Y. Zomaya is currently the Chair Professor of High Performance Computing & Networking in the School of Information Technologies, University of Sydney. He is also the Director of the Centre for Distributed and High Performance Computing which was established in late 2009. Dr. Zomaya was an Australian Research Council Professorial Fellow during 2010-2014 and held the CISCO Systems Chair Professor of Internetworking during the period 2002–2007 and also was Head of school for 2006–2007 in the same school. Prior to his current appointment he was a Full Professor in the Electrical and Electronic Engineering Department at the University of Western Australia, where he also led the Parallel Computing Research Laboratory during the period 1990–2002. He served as Associate–, Deputy–, and Acting–Head in the same department, and held numerous visiting positions and has extensive industry involvement. Dr. Zomaya published more than 600 scientific papers and articles and is author, co-author or editor of more than 20 books. He served as the Editor in Chief of the IEEE Transactions on Computers (2011-2014). Currently, he serves as a Founding Editor-in-Chief for the IEEE Transactions on Sustainable Computing, a Co-Founding Editor in Chief of the IET Cyber-Physical Systems: Theory and Applications, Associate Editor-in-Chief (Special Issues), Journal of Parallel and Distributed Computing. Dr. Zomaya is an Associate Editor for several leading journals, such as, ACM Transactions on Internet Technology, ACM Computing Surveys, IEEE Transactions on Cloud Computing, IEEE Transactions on Computational Social Systems, and IEEE Transactions on Big Data. He is also the Founding Editor of several book series, such as, the Wiley Book Series on Parallel and Distributed Computing, Springer Scalable Computing and Communications, and the IET Book Series on Big Data. Dr. Zomaya was the Chair the IEEE Technical Committee on Parallel Processing (1999–2003) and currently serves on its executive committee. He is the Vice–Chair, IEEE Task Force on Computational Intelligence for Cloud Computing and serves on the advisory board of the IEEE Technical Committee on Scalable Computing and the steering committee of the IEEE Technical Area in Green Computing. Dr. Zomaya has delivered more than 180 keynote addresses, invited seminars, and media briefings and has been actively involved, in a variety of capacities, in the organization of more than 700 conferences. Dr. Zomaya is a Fellow of the IEEE, the American Association for the Advancement of Science, the Institution of Engineering and Technology (UK). He is a Chartered Engineer and an IEEE Computer Society’s Golden Core member. He received the 1997 Edgeworth David Medal from the Royal Society of New South Wales for outstanding contributions to Australian Science. Dr. Zomaya is the recipient of the IEEE Technical

Committee on Parallel Processing Outstanding Service Award (2011), the IEEE Technical Committee on Scalable Computing Medal for Excellence in Scalable Computing (2011), the IEEE Computer Society Technical Achievement Award (2014), and the ACM MSWIM Reginald A. Fessenden Award (2017). His research interests span several areas in parallel and distributed computing and complex systems. More information can be found at <http://www.it.usyd.edu.au/~azom0780/>.

---