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**Short Biography**

Dr. Kun Ma received his Ph.D degree in Computer Software and Theory from Shandong University, Jinan, Shandong, China, in 2011. He is a lecturer (University Professor) in Provincial Key Laboratory for Network based Intelligent Computing and School of Information Science and Engineering, University of Jinan, China. He has authored and coauthored over 60 research publications in peer-reviewed reputed journals and conference proceedings. He has served as the program committee member of various international conferences and reviewer for various international journals. He is the Co-Editor-in-Chief of International Journal of Computer Information Systems and Industrial Management Applications (IJCSIM) and International Journal of Autonomic Computing (IJAC). He is the managing editor of Journal of Information Assurance and Security (JIAS). He is the editorial board member of International Journal of Grid and Utility Computing and International Journal of Intelligent Systems Design and Computing. He is the guest editor of International Journal of Grid and Utility Computing ,Informatica, International Journal of Communication Networks and Distributed Systems, International Journal of High Performance Computing and Networking, Recent Patents on Computer Science, and International Journal of Services Technology and Management. His research interests include model-driven engineering (MDE), data intensive computing, big data management, and multi-tenant techniques. He has obtained 14 patents for inventions.

**Education**

1 Shandong University, Jinan, P.R.China

Ph.D. in Computer Science and Technology (2011)

Thesis topic: Research on Some Key Issues in Model and Model Transformation Approach in Model-Driven Architecture

2 University of Jinan, Jinan, P.R.China

Master of Computer Application and Technology (2007)

Thesis topic: Implementation of Topological Discovering and Network Monitoring in Campus Network

3 University of Jinan, Jinan, P.R.China

Bachelor of Computer Science and Technology (2004)

Thesis topic: Research of network management and monitoring based on open source

### Research Projects

- [1]. 61772231, 面向海量数据流处理的隐式世系跟踪容错方法研究, 国家自然科学基金面上项目, 2018.01-2021.12, 主持
- [2]. ZR2017MF025, 海量数据流处理动态扩展与隐式世系跟踪容错方法的研究, 山东省自然科学基金面上项目, 2017.08-2020.06, 主持
- [3]. 2015GGX106007, 支持跟踪容错的大数据流处理平台研发及在数字传媒行业中的应用, 山东省重点研发计划, 2016.01-2017.12, 主持
- [4]. ZR2014FQ029, 多承租海量数据缓存自适应替换策略与一致性方法的研究, 山东省自然科学基金青年基金, 2014.12-2017.12, 主持
- [5]. J16LN13, 数字传媒行业大数据流处理系统关键技术的研究, 山东省高等学校科研计划项目, 2017.01-2018.12, 主持
- [6]. LDXX2017KF155, 海量数据实时流处理关键技术研究及在智慧物流云平台的应用, 临沂大学信息科学与工程学院智能物流信息工程特色学科团队联合开放基金, 2017.07-2019.06, 主持
- [7]. 2015SE03, 电商极限事务型应用中海量数据缓存即时一致世系跟踪容错方法的研究, 山东计算机学会省重点实验室联合开放基金, 2015.09-2017.08, 主持

### Publications (not complete)

#### Journal Papers

- [1]. Kun Ma, Bo Yang, and Ziqiang Yu, "Optimization of Stream-based Live Data Migration Strategy in the Cloud," *Concurrency and Computation: Practice and Experience*, 2017, online: 1-18
- [2]. Kun Ma, Bo Yang, Zhe Yang, and Ziqiang Yu, "Segment Access-aware Dynamic Semantic Cache in Cloud Computing Environment," *Journal of Parallel and Distributed Computing*, 2017, 110 (12): 42-51 (WOS: , IF: 1.93, EI: 20172203704604, CCF B, Q3)
- [3]. Ma, K. and Yang, B., "Stream-based Live Data Replication Approach of In-memory Cache," *Concurrency and Computation: Practice and Experience*, 2017, 29 (11): e4052: 1-9 (WOS: 000400975800008, IF: 1.133, EI: 20170703347349, CCF C)
- [4]. Ziqiang Yu, Yuehui Chen, Kun Ma\*, "Real-time processing of k-NN queries over moving objects," *Soft Computing*, 2017, 21 (18): 5181-5191 (EI: 20165003117640, IF: 2.472, CCF C, Q3)
- [5]. Ma, K. and Yang, B., "Stream-based Live Entity Resolution Approach with Adaptive Duplicate Count Strategy," *International Journal of Web and Grid Services*, 2017, 13 (3): 351-373 (WOS: 000408254700007, EI: 20173003969041, IF: 1.105, Q3)
- [6]. Ma, K. and Yang, B., "Column Access-aware In-stream Data Cache with Stream Processing Framework," *Journal of Signal Processing Systems*, 2017, 86 (2): 191-205 (EI: 20161102079610, WOS: 000392386900007, IF: 0.893)
- [7]. Ma, K. and Yang, B., "Large-scale Schema-free Data Deduplication Approach with Adaptive Sliding Window using MapReduce," *The Computer Journal*, 2015, 58 (11): 3187-3201 (EI: 20154801604848, WOS:000365157000025, IF:1, CCF B)
- [8]. Ma, K., and Abraham, A., "Introducing Versioning-based Software Online Upgrade Framework

over a Peer-to-Peer Network," *Computing and Informatics*, 2015, 34 (6): 1357-1373 (WOS: 000370996500007, IF: 0.524)

- [9]. Ma, K., and Yang, B., "Introducing Extreme Data Storage Middleware of Schema-free Document Stores using MapReduce," *International Journal of Ad Hoc and Ubiquitous Computing*, 2015, 20 (4): 274–284 (WOS: 000366130900006, EI: 20155201714641, IF: 0.489)
- [10]. Ma, K., and Yang, B., "A Simple Scheme for Bibliography Acquisition using DOI Content Negotiation Proxy," *The Electronic Library*, 2014, 32 (6): 806-824 (WOS: 000346109800003, IF:0.436)
- [11]. Ma, K., Sun, R., and Abraham, A., "Toward a module-centralized and aspect-oriented monitoring framework in clouds," *Journal of Universal Computer Science*, 2013, 19 (15): 2241-2265 (WOS: 000329491500006, IF: 0.401)
- [12]. Ma, K., Yang, B., and Abraham, A., "A Template-based Model Transformation Approach for deriving multi-tenant SaaS applications," *Acta Polytechnica Hungarica*, 2012, 9 (2): 25-41 (WOS: 000306096900002, IF: 0.588)
- [13]. Ma, K., Yang, B., Chen, Z., and Abraham, A., "A Relational Approach to Model Transformation with QVT Relations Supporting Model Synchronization," *Journal of Universal Computer Science*, 2011, 17 (13): 1863-1883 (WOS: 000304607500006, IF: 0.385)
- [14]. Ma, K., Sun, R., and Abraham, A., "Toward a module-centralized and aspect-oriented monitoring framework in clouds," *Journal of Universal Computer Science*, 2013, 19 (15): 2241-2265 (WOS: 000329491500006, IF: 0.401)
- [15]. Ma, K., Yang, B., Chen, Z., and Abraham, A., "A Relational Approach to Model Transformation with QVT Relations Supporting Model Synchronization," *Journal of Universal Computer Science*, 2011, 17 (13): 1863-1883 (WOS: 000304607500006, IF: 0.385)

### Conference Papers

1. Kun Ma, Ziqiang Yu, Ke Ji, Bo Yang, Stream-based Live Probabilistic Topic Computing and Matching, Proceedings of the 17th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP 2017), Part II, Lecture Notes in Computer Science, 10393, Helsinki, Finland, Aug. 21-23, 2017, 1-10 (EI: , INSPEC:, WOS:, CCF C 类)
2. Ma, K., Tang, Z., Zhong, J., Yang, B., LPSMon: A Stream-based Live Public Sentiment Monitoring System, Proceedings of The 17th International Conference on Web-Age Information Management, Part II, Lecture Notes in Computer Science , Nanchang, China, June 3-5, 2016, 9659: 534-536 (EI: 20162702570719, WOS:000389411500045, CCF C 类)
3. Ma, K., Yang, B., Access-aware In-memory Data Cache Middleware for Relational Databases, Proceedings of 17th IEEE International Conference on High Performance Computing And Communications (HPCC 15), New York, USA, August 24 - 26, 2015, 1506-1511 (EI: 20161402178126, INSPEC:15635096, WOS:000380408100247, CCF C 类)
4. Ma, K., Yang, B., and Chen, G., DOI Proxy Framework for Automated Entering and Validation of Scientific Papers, Proceedings of the 14th International Conference on Web-Age Information Management (WAIM 2013), Lecture Notes in Computer Science, Qinhuaingdao, China, June 14-16, 2013, 2013, 7923: 799-801 (EI: 20132916507664, CCF C 类)

### Patent for Invention (in Chinese)

1. 发明专利 (申请号: 201510056231.9, 2015-02-03, 公开(公告)号: CN104572505A, 2015-

- 04-29),进入实质审查日期: 2015-05-13, 授权日期: 2017-05-17. 一种保证海量数据缓存最终一致性的系统及方法. 申请人: 济南大学, 发明人: 马坤. (granted).
2. 发明专利(申请号: 201510055798.4, 2015-02-03, 公开(公告)号: CN104598396A, 2015-05-06),进入实质审查日期: 2015-05-13, 授权日期: 2017-06-16. 一种保证海量数据缓存实时性和一致性的系统及方法. 申请人: 济南大学, 发明人: 马坤. (granted).
  3. 发明专利(申请号: 201310139277.8, 2013-04-19, 公开(公告)号: CN103197932A, 2013-07-10),进入实质审查日期: 2013-07-17, 授权日期: 2016-04-19. 一种开发无模式文档型数据库应用的业务组件模型. 申请人: 济南大学, 发明人: 马坤, 杨波, 陈广伟. (granted).
  4. 发明专利(申请号: 201310239673.8, 2013-06-18, 公开(公告)号: CN103279361A, 2013-09-04),进入实质审查日期: 2013-09-18, 授权日期: 2016-01-27. 小书签驱动的文献统一分享装置与方法. 申请人: 济南大学, 发明人: 马坤, 张磊, 陈贞翔. (granted).
  5. 发明专利(申请号: 201310716863.4, 2013-12-23, 公开(公告)号: CN103631972A, 2014-03-12),进入实质审查日期: 2014-03-19, 授权日期: 2016-09-21. 一种列访问感知的数据缓存方法及系统. 申请人: 济南大学, 发明人: 马坤, 杨波. (granted).
  6. 发明专利(申请号: 201210309118.3, 2012-08-27, 公开(公告)号: CN102868731A, 2013-01-09),进入实质审查日期: 2013-01-23, 授权日期: 2014-12-17. 软件在线升级及加速下载的方法和装置. 申请人: 济南大学, 发明人: 马坤, 杨波. (granted).
  7. 发明专利(申请号: 201210307910.5, 2012-08-27, 公开(公告)号: CN102833131A, 2012-12-19),进入实质审查日期: 2013-01-09, 授权日期: 2016-05-25. 一种远程数据库响应性能测试比较系统及方法. 申请人: 济南大学, 发明人: 陈贞翔, 王可可, 杨波, 马坤, 刘鹏. (granted).
  8. 发明专利(申请号: 201210536616.1, 2012-12-13, 公开(公告)号: CN102999629A, 2013-03-27),进入实质审查日期: 2013-04-03, 授权日期: 2016-01-13. 一种关系数据库到无模式数据库异步转换系统及方法. 申请人: 济南大学, 发明人: 马坤, 杨波, 陈广伟. (granted).
  9. 发明专利(申请号: 201710248537.3, 2017-04-17, 公开(公告)号: , ),进入实质审查日期: 2017-08-30, 授权日期: 0000-00-00. 一种概率主题计算与匹配的舆情监测方法及系统. 申请人: 济南大学, 发明人: 马坤、周劲、于自强、纪科. (pending).
  10. 发明专利(申请号: 201710284487.4, 2017-04-25, 公开(公告)号: , ),进入实质审查日期: 2017-09-13, 授权日期: 0000-00-00. 基于低水位滑动时间窗口的离群数据发现方法及系统. 申请人: 济南大学, 发明人: 马坤、周劲、于自强、纪科. (pending).

#### Editorial Board

- [1]. (2010 - ), Managing Editor, Journal of Information Assurance and Security (JIAS, 1554-1010).
- [2]. (2013- ), Co-Editor-in-Chief, International Journal of Computer Information System and Industrial Management Application (IJCSIM, 2150-7988).
- [3]. (2013), Guest Editor, Special Issue on: "Innovative Applications for the Cloud" (Int. J. of Grid and Utility Computing, IJGUC, 1741-847X).
- [4]. (2014), Guest Editor, Special Issue on: "Large Data Management in the Cloud" (Informatica, 0350-5596).
- [5]. (2015), Guest Editor, Special Issue on: "Datacenter and Big data in Cloud Computing" (International Journal of Computational Science and Engineering, IJCSE, 1742-7185).
- [6]. (2015), Guest Editor, Special Issue on: "Datacenter and Big data in Cloud Computing"

- (International Journal of High Performance Computing and Networking, IJHPCN, 1740-0562).
- [7]. (2016), Guest Editor, Special Issue on: "Recent Advances in Big Data Management" (Recent Patents on Computer Science, RPCSeng, 2213-2759).
  - [8]. (2016), Guest Editor, Special Issue on: "Big Data Management in the Cloud" (International Journal of Services Technology and Management, IJSTM, 1460-6720).
  - [9]. (2017), Guest Editor, Special Issue on: "Emerging Trends, Applications and Services in Communication Networks" (Int. J. of Communication Networks and Distributed Systems, IJCNDS, 1754-3916).

### **Teaching Project**

- [1]. 201701002017, 互联网+背景下计算机专业校企协同创新创业课程组建设与人才培养, 教育部产学合作协同育人项目, 2017.07-2018.06, 主持
- [2]. 201601018009, 济南大学计算机类专业《云计算》卓创课程建设, 教育部产学合作协同育人项目, 2016.12-2017.12, 主持
- [3]. J1524, 模型驱动软件快速开发方法在软件工程实践环节中的研究与应用, 济南大学教学研究项目, 2016.01-2017.12, 主持
- [4]. J1344, 项目驱动做中学教学法在软件工程类课程中的研究与实践, 济南大学教学研究项目, 2014.01-2015.10, 主持

### **Teaching Publication**

- [1]. Ma, K., Teng, H., Du, L., Zhang, K., "Exploring Mobile Instant Messaging and Self-service to Leverage Learner Participation for Collaborative Teaching," International Journal of Continuing Engineering Education and Life-Long Learning, 2016, 26 (3): 330-334 (EI: 20163502753914)
- [2]. Ma, K., Teng, H., Du, L., Zhang, K., "Exploring Model Driven Engineering Method for Teaching Software Engineering," International Journal of Continuing Engineering Education and Life-Long Learning, 2016, 26 (3): 294-308 (EI: 20163502753912)
- [3]. Ma, K., and Yang, B., "Experiences in Teaching Virtualization with Private Cloud Platform," International Journal of Continuing Engineering Education and Life-Long Learning, 2015, 25 (3): 301-314 (EI:20154601545750)
- [4]. Ma, K., Teng, H., Du, L., Zhang, K., "Project-Driven Learning-by-Doing Method for Teaching Software Engineering using Virtualization Technology," International Journal of Emerging Technologies in Learning, 2014, 9 (9): 26-31 (EI:20144900275315)