

# 亢保元

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## 教学科研简介

教学方面，多年来为本科生、研究生主讲过“离散数学”、“组合数学”、“高等数学”、“高等代数”、“概率论与数理统计”、“抽象代数”、“算法设计与分析”、“计算机密码学”等课程；参加编写《密码学教程》、《线性代数与解析几何》两本教材；参加中南大学和西北工业大学教改项目三项；获得西北工业大学优秀教学成果二等奖一项；获得陕西省第二届青年教师高等数学讲课比赛二等奖。

科研方面，主持完成天津市自然科学基金项目一项；参加完成国防预研基金项目一项；参加完成国家自然科学基金两项；参加完成湖南省自然科学基金两项；在国际、国内期刊及学术会议上发表论文八十余篇，SCI、EI 收录论文二十余篇，应邀为多个国际学术期刊的论文审稿，目前主要研究方向为数字签名、身份认证、电子货币等。

## 学习经历

- (1) 1995-09 至 1999-03, 西安电子科技大学, 密码学专业, 博士
- (2) 1990-09 至 1993-07, 山西大学, 基础数学专业, 硕士
- (3) 1983-09-至 1987-07, 宝鸡师范学院, 基础数学专业, 学士

## 工作经历

- (1) 2009-05 至今, 天津工业大学, 软件学院, 教授
- (2) 1999-07-2009-05, 中南大学, 数学科学与计算技术学院, 副教授, 教授  
(期中 2007-03-2008-03, 澳大利亚昆士兰科技大学, 信息安全学院, 国家公派访问学者)
- (3) 1993-07-1999-07, 西北工业大学, 应用数学系, 助教, 讲师

## 主讲课程

高等数学, 线性代数, 计算机密码学, 离散数学

## 代表性论文

[1] Baoyuan Kang, Yanbao Han, Kun Qian, Jianqi Du, Analysis and Improvement on an Authentication Protocol for IoT-Enabled Devices in Distributed Cloud Computing

Environment, Mathematical Problems in Engineering, 2020, 2020.

[2] Baoyuan Kang, Jianqi Du, Yanbao Han, and Kun Qian, A Lightweight Anonymous Mobile Payment Scheme for Digital Commodity in Cloud Computing Service, International Journal of Network Security, Vol.22, No.6, 2020, PP.945-953

[3] Baoyuan, Kang, Mu Wang, Dongya, Jing, An Off-Line Payment Scheme for Digital Content via Subliminal Channel, Journal of information science and engineering, vol.34, pp. 171-192 (2018)

[4] Baoyuan Kang, Dongyang Shao and Jiaqiang Wang, A fair electronic payment system for digital content using elliptic curve cryptography, Journal of Algorithms & Computational Technology, vol. 12, no. 1, pp. 13-19, 2018

[5] Baoyuan Kang, Lin Si, Hong Jiang, Chunqing Li, Mingming Xie, ID-Based Public Auditing Protocol for Cloud Data Integrity Checking with Privacy-Preserving and Effective Aggregation Verification, Security and Communication Networks, Volume 2018, Article ID 3205898, 9 pages, <https://doi.org/10.1155/2018/3205898>

[6] Baoyuan Kang, Jiaqiang Wang and Dongyang Shao, Certificateless public auditing with privacy preserving for cloud assisted wireless body area networks, Mobile information systems, vol. 2017, Article ID 2925465, 5 pages. <https://doi.org/10.1155/2017/2925465>

[7] Baoyuan Kang, Jiaqiang Wang and Dongyang Shao, Attack on privacy—reserving public auditing schemes for cloud storage, Mathematical problems in engineering, vol. 2017, Article ID 8062182, <https://doi.org/10.1155/2017/8062182>

[8] Kang Baoyuan, Wang Mu, Jing Dongya, An efficient certificateless aggregate signature scheme, Wuhan university journal of natural sciences, vol. 22, no. 2, 2017, pp. 165-170.

[9] Kang, Baoyuan, Xu, Danhui, Secure Electronic Cash Scheme with Anonymity Revocation, Mobile Information Systems, vol. 2016, Article ID 2620141 <http://dx.doi.org/10.1155/2016/2620141>

[10] Baoyuan Kang, Danhui Xu, Perfect-Mail: A secure e-mail protocol with perfect forward secrecy, British Journal of Mathematics and Computer Science, vol.12, no.5, pp. 1-11, 2016

[11] Kang, Baoyuan, Xu, Danhui, A secure certificateless aggregate signature scheme, International Journal of Security and its Applications, vol. 10, no. 3, pp. 55-68, 2016

[12] Kang, Baoyuan, Xu, Danhui, An untraceable off-line electronic cash scheme without merchant frauds, International Journal of Hybrid Information Technology, vol. 9, no. 1, pp. 431-442, 2016

[13] Kang, Baoyuan, Xu, Danhui, A secure multi-receivers e-mail protocol, International Journal of Multimedia and Ubiquitous Engineering, vol. 11, no. 11, pp. 335-342, 2016

[14] Baoyuan Kang, On delegatability of some strong designated verifier signature schemes, Mathematics problems in engineering, Volume 2014, Article ID 761487, 5 pages, doi: 10.1155/2014/761487.

[15] Baoyuan Kang, Colin Boyd, Ed Dawson, A novel identity-based strong designated verifier signature scheme, Journal of Systems and Software, vol. 82, no. 2, February, 2009, pp. 270-273

[16] Baoyuan Kang, Colin Boyd, Ed Dawson, Identity-based strong designated verifier signature schemes: Attacks and new construction. *Computers and Electrical Engineering*, vol. 35, no. 1, January, 2009, pp. 49-53

[17] Baoyuan Kang, Colin Boyd, Ed Dawson, A novel nonrepudiable threshold multi-proxy multi-signature scheme with shared verification. *Computers and Electrical Engineering*, vol. 35, no. 1, January, 2009, pp. 9-17

[18] Baoyuan Kang, ID-based aggregate signature scheme with constant pairing computations: attack and new construction, *Journal of Computational Information Systems*, vol. 8, no. 16, pp. 6611-6618, 2012

[19] Baoyuan Kang, Attacks on One Designated Verifier Proxy Signature Scheme, *Journal of applied mathematics*, Volume 2012, Article ID 508981, 6 pages, doi: 10.1155/2012/508981

[20] Baoyuan Kang, On the security of some aggregate signature schemes, *Journal of applied mathematics*, Volume 2012, Article ID 416137, 10 pages, doi: 10.1155/2012/416137

#### 教学科研项目

- (1) 天津市自然科学基金，面上项目（编号：15JCYBJC15900），信息安全中强安全聚合签名的研究，2015/04-2018/03，10万，主持。
- (2) 国家自然科学基金（编号：61202099），车载自组织网络数据安全聚合机理与方法研究。参加

#### 获奖情况