

## ***Nianjun (Joe) Zhou, PhD***

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### **MAJOR IBM AWARDS**

- IBM Corporate Technical Recognition: 2013 Best of IBMer
- IBM Corporate Award accomplishment for Delivery Excellence Analytics 2013
- Best of IBMers of 2013
- IBM Outstanding Innovation Award in Service Estimation 2012
- IBM Outstanding Innovation Award in Appreciation for Leadership and Technical Contributions to IBM Internal Grid, 2005

### **ACADEMIC COMMUNITY ACTIVITIES**

- IBM Professional Interest Group Chair for Services Computing (2010-2013)
- Program Committee Co-Chair of IEEE Big Data 2013
- Program Community Members for IEEE Cloud, ICWS and SCC (2008-2017)

### **PROFESSIONAL EXPERIENCE**

#### **IBM Watson Research Center**

*(June 2007 - ) Position: Research Staff Member*

#### **IBM, CIO, Advanced Internet Technology Group and Global Services BTO Managed Business Process Services Asset Lab**

*(June 97 – June 2007) Senior Software Engineer (Final Position)*

#### **New York State, Department of Environmental Conservation, Bureau of Air Research**

*Albany, NY (Dec. 91—June, 97), Research Scientist*

### **EDUCATION**

**Rensselaer Polytechnic Institute, Troy, NY (GPA 3.93/4.0)**

**Ph.D. in Electrical Engineering, December 2004**

Dissertation: "Routing overhead in variable topology networks" using Information Theory

**Rensselaer Polytechnic Institute, Troy, NY (GPA 4.0/4.0)**

**Master of Engineering, Computer and Systems Engineering, May 1997**

Concentrations: Computer Networks and Software Engineering

**Beijing University, Beijing, China (GPA 3.9/4.0)**

**M.S. in Electrical Engineering, July 1985, Concentration: Systems Sciences**

**B.S. in Electrical Engineering, July 1982, Concentration: Electronics**

### **PATENTS**

- 40+ patents in content management, caching, service and Cloud computing, and labor economics

### **CONFERENCE AND JOURNAL PUBLICATIONS**

Yucong Duan, Guohua Fu, Nianjun Zhou, Xiaobing Sun, Mingdong Tang, Honghao Gao: Towards a problem-value-constraint framework for maximising business value through minimising under design and over design. *IJSTM* 22(1/2): 120-141 (2016)

Nianjun Zhou, Wesley M. Gifford, Junchi Yan, Hongfei Li: End-to-End Solution with Clustering Method for Attrition Analysis. *SCC* 2016: 363-370, 2015

Yucong Duan, Guohua Fu, Nianjun Zhou, Xiaobing Sun, Nanjangud C. Narendra, Bo Hu: Everything as a Service (XaaS) on the Cloud: Origins, Current and Future Trends. *CLOUD* 2015: 621-628

Nianjun Zhou, Ajay Mohindra: Causality-Driven Performance Monitoring and Scaling Automation for Managed Solutions. *SCC* 2015: 467-474

Rohit Ranchal, Ajay Mohindra, Nianjun Zhou, Shubir Kapoor, Bharat K. Bhargava: Hierarchical Aggregation of Consumer Ratings for Service Ecosystem. *ICWS* 2015: 575-582

Yucong Duan, Chengxiang Ren, Nianjun Zhou, Xiaobing Sun, Mingdong Tang, Honghao Gao: A Problem-Value-Constraint Framework for Minimizing Under Design and Over Design in Web Service Based System Development. *ICSS* 2015: 117-124, 2014

Nianjun Zhou, Wesley M. Gifford, Krishna Ratakonda, Gregory H. Westerwick, Carl Engel: On the Quantification of Global Team Performance and Profitability. *IEEE SCC* 2014: 378-385

N. Zhou, A. Mohindra: Causality Analysis of IT Capabilities to Achieve Maximum Business Outcomes. *IEEE SCC* 2015

R. Ranchal, A. Mohindra, N. Zhou, S. Kapoor, and B. Bhargava. Hierarchical Aggregation of Consumer Ratings for Service Ecosystem. *IEEE ICWS* 2015.

Y. Duan, G. Fu, N. Zhou, X. Sun, N.C. Narendra, B. Hu: Everything as a Service (XaaS) on the Cloud: Origins, Current and Future Trends. *IEEE Cloud* 2015

N. Zhou, W. M. Gifford, K. Ratakonda, G.H. Westerwick, C. Engel: On the Quantification of Global Team Performance and Profitability. *IEEE SCC* 2014: 378-385

N. Zhou, S. Nitta, A. Mohindra: Causality Analysis of IT Capabilities to Achieve Maximum Business Outcomes. *IEEE SCC* 2014: 741-748

Y. Duan, N. C. Narendra, W. Du, Y. Wang, N. Zhou: Exploring Cloud Service Brokering from an Interface Perspective. *ICWS* 2014: 329-336

N. Zhou, W. M. Gifford, K. Ratakonda: Toward a Flexible Bidding Strategy with Preference Analysis. *IEEE SCC* 2013: 619-626

N. C. Narendra, K. Ponnalagu, Nianjun Zhou, Wesley M. Gifford: Towards a Formal Model for Optimal Task-Site Allocation and Effort Estimation in Global Software Development. *SRII Global Conference* 2012: 470-477

N. Zhou, W. M. Gifford, K. Ratakonda: On the Analysis of Global Team Performance. *SRII Global Conference* 2012: 735-743

N. Zhou, D. An, L. Zhang, C. Wong "Leveraging Cloud Platform for Custom Application Development" submitted to IEEE Cloud Computing 2011, July 5-10, Washington D.C.

Y. Chee, N. Zhou, F. Meng, S. Bagheri, P. "A Pattern-Based Approach to Cloud Transformation"; IEEE Cloud Computing 2011, July 5-10, Washington D.C.

N. Zhou and A.A. Abouzeid, "Routing in Ad Hoc Networks: A Theoretical Framework with Practical Implications," IEEE Transactions on Information Theory, Oct. 2009, pp 4608-4625

N. Zhou, L.J. Zhang, Analytic Architecture Assessment in SOA Solution Design and Its Engineering Application, IEEE International Conference on Web Services, July 6-10, 2009, Los Angeles, CA, USA

N. Zhou, Q. Ma, K. Ratakonda Evaluating Service Identification with Design Metrics on Business Process Decomposition, IEEE International Conference on Services Computing, Sept 22-28, 2009, Bangalore, India

Q Ma, N. Zhou, Y. Zhu, H. Wang, Quantitative Modeling of Communication Cost for Global Service Delivery, 2009 IEEE International Conference on Services Computing, Sept 22-26, 2009, Bangalore, India

L.J. Zhang, Z.H. Mao, and N. Zhou, Design Quality Analytics of Traceability Enablement in Service-Oriented Solution Design Environment, IEEE International Conference on Web Services, July 6-10, 2009, Los Angeles, CA, USA

Nianjun Zhou, Liang-Jie Zhang: A Graph Theory Based Impact and Completion Analysis Framework and Applications for Modeling SOA Solution Components. IEEE SCC (1) 2008: 145-154

Nianjun Zhou, Yi-Min, Liang-Jie Zhang: Coding-Free Model-Driven Enablement Framework and Engineering Practices of a Context-Aware SOA Modeling Environment. IEEE ICWS 2008: 553-560

L.-J. Zhang, N. Zhou, Y.-M. Chee, A. Jalaldeen, K. Ponnalagu, R. R. Sindhgatta, A. Arsanjani, and F. Bernardini: SOMA-ME: A platform for the model-driven design of SOA solution, IBM Systems Journal, Vol 47, No 3, 2008: 397-413

N. Zhou and A. Abouzeid, "Information Theoretic Analysis of Proactive Routing Overhead in Ad Hoc Networks," IEEE Transactions on Information Theory, submitted April 2004, revised August 2006 (Conference version in IEEE INFOCOM 2005).

N. Zhou, R. Alimi, "Computational Efficiency and Practical Implications for a Client Grid", Submitted to the 2006 International Conference on High Performance Computing and Communications (HPCC-06), Munich, Germany, September, 2006.

N. Zhou, D. S. Meliksetian, J. P. Prost and I. Boutboul "Optimal Information Gathering Scheme over a Scalable Grid Information Services Architecture", International Conference on Web Information Systems and Technologies (WEBIST), Setúbal, Portugal. April 2006.

N. Zhou and A. Abouzeid, "Routing in ad hoc networks: A theoretical framework with practical implications," in *IEEE INFOCOM*, Miami, FL, USA, March 2005.

N. Zhou, H. Wu and A. Abouzeid, "The Impact of Traffic Patterns on the Overhead of Reactive Routing Protocols," IEEE Journal on Selected Areas in Communications, Special Issue on Wireless Ad Hoc Networks, January 2005.

N. Zhou, H. Wu and A. Abouzeid, "Reactive Routing Overhead in Networks with Unreliable Nodes," Proceedings of Ninth Annual International Conference on Mobile Computing and Networking (MobiCom'03), San Diego, CA, USA, September, 2003.

N. Zhou and A. Abouzeid, "Information-Theoretic Lower Bounds on the Routing Overhead in Mobile Ad-hoc Networks," Proceedings of IEEE International Symposium on Information Theory (ISIT), Yokohama, Japan, June 2003.

N. Zhou and A. Abouzeid, "Information-Theoretic Bounds for Mobile Ad-hoc Networks Routing Protocols," Proceedings of International Conference on Networks (ICOIN), Jeju Island, Korea, February 2003. (Selected as One of the Best Papers in ICOIN2003).

N. Zhou, G. A. Mihaila, D. S. Meliksetian, "XML data mediator integrated solution for xml roundtrip from xml to relational," WWW (Alternate Track Papers & Posters) 2004: 424-425

N. Zhou, D. S. Meliksetian, L. Weitzman, S. Dean, J. Milton, P. Davis, J. Wu, "XML Content Management: Challenges and Solutions," *XML Europe 2001*, 2001

L. Weitzman, S.E. Dean, D. Meliksetian, K. Gupta, N.Zhou, and J. Wu, "Transforming the content management process at IBM.com," In Proc. Conf. on Human Factors and Computing Systems, Minneapolis, Minnesota, 2002, pp. 1-15.