University of Birmingham

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About

Yufeng Zhang is the Director of Business Programmes with Engineering, Sciences & Law. He is the academic Coordinator of the EU FP7 Europe-China High Value Engineering Network (EC-HVEN), **www.birmingham.ac.uk/hven (http://www.birmingham.ac.uk/hven)** . He is a Fellow of the Higher Education Academy

High Value Engineering (HVE)

High value engineering (HVE) is the application of engineering technologies, skills and capabilities to the creation, development and deployment of high value adding products and services that may lead to sustainable economic growth in complex global business networks. The effective management of HVE activities in global engineering networks (GEN) has been focused on a set of essential capability areas including accessing & deploying dispersed resources, coordinating & integrating network activities, collective learning & knowledge management, etc.

Engineering Value Chain (EVC)

Engineering value chain (EVC) refers to a series of engineering activities contributing to effective value creation in various industrial settings. A normal EVC model consists of five categories of activities through which engineering operations may contribute to customer value and thus the overall competitiveness of a firm – idea generation and selection, design and development, production and delivery, service and support, and recycling and disposal.

Global Engineering Network (GEN)

Global engineering network (GEN) is an integrating research framework for improving the effectiveness and efficiency of engineering functions in internationally distributed network operations. Key characteristics of GEN management include

- Efficient engineering processes for managing engineering operations on a global scale.
- Effective engineering learning through managing explicit and tacit engineering knowledge.
- Flexible engineering resources to fully deploy network based engineering capabilities.
- Digital engineering environment supported by integrated information and communication technologies (ICT).

Feedback and office hours

Mon 11am-12noon

Wed 1-3pm

Room 239, University House, Birmingham Business School

Qualifications

- PhD, Engineering (Cambridge University)
- Dipl-Ing/MSc, Global Production Engineering (Technical University of Berlin)
- BEng, Mechanical Engineering (Shanghai Jiao Tong University)
- BEng, International Finance (Shanghai Jiao Tong University)
- PG Cert in Learning & Teaching in Higher Education
- Fellow of the Higher Education Academy (FHEA)

Biography

Yufeng Zhang is now a Senior Lecturer in Operations and Supply Chain Management at the University of Birmingham. Yufeng received his undergraduate degrees in Mechanical Engineering (BEng) and International Finance (BEng) from Shanghai Jiao Tong University, China; earned his Dipl-Ing/MSc in Global Production Engineering with honours from the Technical University of Berlin, Germany; and gained his PhD in Engineering at

Cambridge University, UK, for working on Global Engineering Networks. Yufeng's early industrial career included responsibilities for project management, key account management and new business development in a Japan based MNC. He continues to work very closely with industry, and have researched and published in the areas of engineering management, network operations, international manufacturing, and technology management.

Teaching

Yufeng Zhang is the Module Leader of the Supply Chain Management (SCM), International Operations & Procurement (IOP), and Operations Management (OM) modules for UG, MSc, and Executive MBA programmes.

Postgraduate supervision

Yufeng Zhang supervises PhD projects in the following areas:

- High Value Engineering **www.birmingham.ac.uk/hven (http://www.birmingham.ac.uk/hven)**
- The Design and Operations of Global Engineering Networks (GEN)
- Supply Chain Management (SCM) and Global Value Chains(GVC)
- Global Engineering Services
- Emerging Industries, Technology Commercialisation, Innovation
- Sustainable Industrial Systems

Doctoral research

PhD title Ongoing PhD projects (lead supervisor):

- Michael Wainaina Githii, writing up, Project Title-**Typology, design and delivery of outsourced information intensive services: a BPO provider operations perspective.**
- Mohamed Khalefa, writing up, Project Title- **An investigation of factors affecting internationalisation of SMEs wood industry in Egypt and its impact on performance: the case of Damietta.**
- Ali Esfahbodi, 3rd Year PhD, Project Title-**The Impact of Sustainable Supply Chain Management (SSCM) Practices on the Manufacturing Firms' Performance.**
- Heng Li, 2nd Year PhD, Project Title- **An exploration of the significance of Absorptive Capacity for Chinese High-Value manufacturing firms: Cases of the heavy machinery industry.**
- Tran Cong Thanh, 1st Year PhD, Project Title- **Green global advanced manufacturing supply chains in emerging economies**

Yufeng Zhang have co-supervised and completed a number of phd projects in the areas of operations process management, innovation systems, lean/agile operations, TQM, etc.

Research

Yufeng Zhang's research focuses on network collaboration issues in technology and operations management domains. Early work explored network collaborations from multiple perspectives, e.g. quality management, supply chain management, production engineering, new product development, technology commercialisation, etc. On-going work explores network concepts in engineering, manufacturing, and service operations on a global scale. Much of his research has been in close collaboration with industry. On-going or recently completed research projects include:

- Europe-China High Value Engineering Network (EC-HVEN) – EC FP7 project to create a foundation for global network collaborations in high value engineering, manufacturing and innovation. This project builds on leading expertise in Europe and China along the whole engineering value chain from research, design, development and production, to delivery, service, support, recycling and disposal. The project has seven founding institutions, including UOB, Cambridge, DTU, Tsinghua, SJTU, Zhejiang University, and HIT, as well as a wider range of academic and industrial partners. **www.birmingham.ac.uk/hven (http://www.birmingham.ac.uk/hven)**
- Global Engineering Networks (GEN) – Cambridge IMRC project to understand how global leading companies manage their dispersed engineering operations in changing business environments.
- Cambridge Integrated Knowledge Centre (CIKC) – EPSRC project to develop advanced manufacturing technologies based on new macromolecular materials systems and to create valid commercial exploitation routes for these innovations.
- Effective Merger and Acquisition Integration – EPSRC project to improve understanding of the processes of international mergers and acquisition as they affect manufacturing.

Other activities

Yufeng Zhang is the Director of Business Programmes with Engineering, Sciences & Law

Publications

Zhang, Y., Gregory, M. and Shi, Y. 2014. "Managing Global Engineering Networks(GEN) PART I: Theoretical Foundations and the Unique Nature of Engineering", Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, vol.228 issue 2, pp. 163-171.

Zhang, Y., Gregory, M. and Shi, Y. 2014."Managing Global Engineering Networks(GEN) PART II: Case Studies and Directions for the Future Research", Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, vol.228 issue 2, pp. 171-180.

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Hansen, N., Zhang, Y. and Ahmed-Kristensen, S. 2013. "Viewing engineering off-shoring in a network perspective: Addressing and managing risks", Journal of Manufacturing Technology Management, vol. 24, issue 2, pp. 154-173.

Engelseth, P., Bach, T. and Zhang, Y. 2013. "Value Co-creation in Engineering", NOFOMA Conference 2013, Göteborg.

Wang, X. and Zhang Y. 2013. "International High Value Engineering Networks: A literature review and the influencing factors", Global Manufacturing Conference, Hangzhou, China.

Esfahbodi, A., Zhang, Y. and Watson, G. 2013. "Sustainable Supply Chain Management: A conceptual framework and exploratory cases", Hangzhou, China.

Khalefa, M., Zhang, Y., Forrester, P., and El-Gohary, H. 2013. “Factors affecting international entrepreneurship (IE) performance: A review of literature”. The 36th ISBE Conference, Cardiff.

Zhang, Y., Ahmed_Kristensen, S. and Gregory, M. 2012. *International Engineering Operations: New Explorations of High Value Engineering and Service. Special Issue Editorial, International Journal of Product Development*, vol. 17, issue 3/4, pp. 171-173.

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Zhang, Y. 2012, "Global engineering services", EUROMA Services Conference, Cambridge.

Zhang, Y. 2012. "How do teaching approaches influence student learning? Case studies of an Operations Management module". EUROMA, Amsterdam.

Zhang, Y. and Gregory, M. 2011. Managing global network operations along the engineering value chain. International Journal of Operations & Production Management, volume 31, issue 7, pp.736-764.

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Zhang, Y. 2010. “Building Network Capabilities for Global Engineering Operations”. POMS annual conference, Vancouver, Canada.

Zhang, Y., et al. 2010. “Network Integration for International Mergers and Acquisitions”. European Journal of International Management, 4(1/2), 56-78.

Co-authored with Minshall, T., et al. 2010. “Manufacturing and open innovation”, book chapter in Nanotechnologies for future Mobile Devices, Ed. Ryhanen, et al. Cambridge Press.

Zhang, Y., et al. 2009. “Core Competencies for Commercializing Emerging Technologies”. The 14th Cambridge International Manufacturing Symposium, Cambridge.

Co-authored with Shi, Y., et al. 2009. “Partnership Management for hi-tech Starg-ups”. The 14th Cambridge International Manufacturing Symposium, Cambridge.

Zhang, Y., et al., 2008. “Global Engineering Networks (GEN): Drivers, Evolution, Configuration, Performance, and Key Patterns”. Journal of Manufacturing Technology Management, 19(3), 299-314.

Zhang, Y., et al., 2008. “Engineering Network Configuration: Transition from Products to Services”. The CIRP ISP2 Service Engineering Conference at Cranfield, UK.

Zhang, Y., et al., 2008. “Capturing Value through Joint Ventures in China: Key Success Factors”. The 34th European International Business Association Conference (EIBA), Estonia.

Co-authored with Shi, Y., et al. 2008. TFT-LCD Industry Review: Looking into the Global Shift and Collaborative Manufacturing Networks. IfM, Cambridge University.

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Zhang, Y., et al., 2006. “Decoding Global Engineering Networks: Key Issues and a Research Framework”. The 11th Cambridge Symposium on International Manufacturing, Cambridge.

Zhang, Y., et al., 2006. “Foundations of Global Engineering Networks: Essential Features of Effective Engineering Networks”. The IEEE International Conference on Management of Innovation and Technology, Singapore.

Zhang, Y. 2004. Perspectives on a Successful Integration of Supply Chain and Quality Management for Network Organisations. Master Thesis. The Technical University of Berlin, Germany.

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