

Prof. Xun W. Xu, PhD, FASME, FIPENZ

The University of Auckland
Department of Mechanical Engineering
Auckland 1142, New Zealand

Associate Dean (Research), Faculty of Engineering

Director of Intelligent and Interoperable Manufacturing Systems
(IIMS) Research Group

Email: xun.xu@auckland.ac.nz

Web: <https://unidirectory.auckland.ac.nz/profile/xun-xu>

Phone: +64 9 9234527

Born on 5 November 1959 (Shanghai, China)



Scientific Career

- Since 2014 Adjunct Professor, Shanghai Jiaotong University, P R China
- Since 2011 Professor, The University of Auckland, New Zealand
- 2007 - 2010 Associate Professor, The University of Auckland, New Zealand
- Since 2008 Adjunct Professor, Shenyang University of Science and Technology, P R China
- 2008 Visiting Professor – WZL, RWTH-Aachen University, Germany
- 2008 Senior Guest Researcher, National Institute of Standards and Technology (NIST), USA
- 2001 - 2006 Senior Lecturer, The University of Auckland, New Zealand
- 2004 - 2005 Senior Guest Researcher, NIST
- Since 2005 Adjunct Professor, Dalian University of Technology, P R China
- 2004 Senior Research Fellow, National Institute of Advanced Industrial Science and Technology (AIST)
- 1996 - 2000 Lecturer, The University of Auckland, New Zealand
- 1996 PhD, University of Manchester (then UMIST), UK,
- 1988 Master of Engineering, Dalian University of Technology, P. R. China,
- 1981 Bachelor of Engineering, Shenyang Jianzhu University, P. R. China

Scholarships, Awards and Faculty Functions

- 2014 Associate Editor, “Journal of Intelligent Manufacturing”, Springer
- 2014 ASME Best Organizer of Symposium & Sessions Award (BOSS Awards), ASME Manufacturing Engineering Division (MED)
- 2013 Elected Fellow of IPENZ (Institute of Professional Engineers New Zealand).
- 2010 Elected Fellow of ASME (American Society for Mechanical Engineers).
- 2010 Associate Editor, “International Journal of Automation and Computing”
- 2004 JSPS Fellow, Japanese Society for the Promotion of Science, Japan.
- Since 2000 Member of Editorial Boards (“International Journal of Production Research”, Taylor & Francis; “Robotics & Computer Integrated Manufacturing”, Elsevier)

Ltd.; "International Journal of Computer Integrated Manufacturing", Taylor & Francis; "International Journal of Advanced Manufacturing Technology", Springer; "International Journal of Manufacturing Research", Inderscience; "International Journal of Internet Manufacturing and Services", Inderscience; "International Journal of Computer Aided Engineering and Technology", Inderscience.)

Ten most important publications

* Publications jointly together with UoA-researchers involved within this IRTG

§ Publications jointly together with USTUTT-researchers involved within this IRTG

A) Published in publication outlets with scientific quality assurance and book publications:

1. § Schlechtendahl, F.; Kretschmer, F.; Sang, Z.; Lechler, A.; Xu, X.: Extended study of network capability for cloud based control systems. *Robotics and Computer Integrated Manufacturing*, available online, doi:10.1016/j.rcim.2015.10.012, 7 pages, 2015.
2. Xu, X.: From cloud computing to cloud manufacturing. *Robotics and Computer-Integrated Manufacturing*, 28(1), p.75-86, 2012.
3. Dipper, T.; Xu, X.; Klemm, P.: Defining, recognizing and representing feature interactions in a feature-based data model, *Robotics and Computer-Integrated Manufacturing*, 27(1), p. 101-114, 2011.
4. Kadir, A.A.; Xu, X.: Towards High-Fidelity Machining Simulation. *Journal of Manufacturing Systems*, 30(3), p. 175-186, 2011.
5. Zhao, F.; Xu, X.; Xie, S.Q.: STEP-NC Enabled On-line Inspection in Support of Closed-loop Machining. *Robotics and Computer-Integrated Manufacturing*, 24(2), p. 200–216, 2008.
6. * Zhao, F.; Xu, X.; Xie, S.Q.: STEP-NC Enabled On-line Inspection in Support of Closed-loop Machining. *Robotics and Computer-Integrated Manufacturing*, 24(2), p. 200-216, 2008.
7. Yu, D.; Hu, Y.; Xu, X.; Huang, Y.; Du, S.: An Open CNC System Based on Component Technology. *IEEE Transactions on Automation Science and Engineering*, 6(2), p. 302-310, 2009.
8. Xu, X.; Wang, H.; Mao, J.; Newman, S.T.; Kramer, T.R.; Proctor, F.M.; Michaloski, J.L.: STEP - Compliant NC Research: The Search for Intelligent CAD/CAPP/CAM/CNC Integration. *International Journal of Production Research*. 43(17), p. 3703 - 3743, 2005.
9. Xu, X.: Integrating Advanced Computer-Aided Design, Manufacturing, and Numerical Control: Principles and Implementations, book, 424 pages. IGI Global. ISBN: 978-1-59904-714-0, 2009.

B) Other publications

10. § Schlechtendahl, J.; Sang, Z.; Kretschmer, F.; Xu, X.; Lechler, A.: Study of network capability for cloud based control systems. 24th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM), May 20–23, 2014, San Antonio, Texas, USA.

C) Patents

Supervised graduate students since graduation year 2011

No.	Last Name, First Name	Degree	Title of the dissertation	Duration of thesis
1	Bin Minhat, Mohamad	PhD	Development of a STEP-NC Controller	2007 - 2011
2	Mokhtar, Alireza*	PhD	Feature interactions for prismatic parts in STEP-NC	2007 - 2011
3	Ridwan, Firman	PhD	Integration of STEP-NC and Machine Condition Monitoring	2008 - 2012
4	Zhang, Terry*	PhD	Web-based Machining Simulation	2008 - 2012
5	Xu, Jenny	PhD	Dual-Resource Constrain Scheduling Systems	2008 - 2012
6	Wang, Ke*	PhD	A CNC system based on real-time Ethernet and Windows NT	2009 - 2013
7	Zuhra Abdul Kadir, Aini	PhD	A Novel Approach Towards High-Fidelity Machining Simulation	2009 - 2013
8	Lin, Anna*	PhD	Knowledge Management Technologies to Support Product Development in Medium Sized High Technology Enterprises	2009 - 2013
9	Wang, Xi	PhD	Development of an Intelligent and Interoperable Manufacturing Platform	2010 - 2014
10	Li, April*	PhD	Enabling technology for rapid development of high value-added customised product	2010 - 2014
11	Stevenson, Daniel	PhD	Development of novel hearing technologies	2010 - 2014
12	Peng, Tao	PhD	A Novel Approach Towards Energy-efficient Machining	2010 - 2014
13	Ou, Mick (Liming)	PhD	Assembly Sequence and Resource Planning	2010 - 2014
14	Zhao, Yuanyuan*	PhD	Ontology for Cloud-based Manufacturing	2011 -
15	Sang, Zhiqian	PhD	STEP-NC Enabled Intelligent Machining	2011 -
16	Lu, Yuqian	PhD	Development of a hybrid cloud manufacturing system	2012 -
17	Yu, Chunyang*	PhD	PRSS-based production control in Cloud manufacturing	2013 -
18	Yu, Shiqiang	PhD	Product Configurator for Cloud Manufacturing	2013 -
19	Wang, Yuanbin	PhD	Design for Additive Manufacturing	2013 -

* -- as a co-supervisor

Most important research grants since 2011

No.	Research Project	Funding Period	Name(s) of the principal investigator(s)	Funding source and reference number
1	The NZ Product Accelerator (NZ\$12,713,940.00)	10/2013 - 09/2019	Taylor, M. Xu, X. others	NZ Ministry of Business, Innovation & Employment
2	Smart Dispenser for Highway Marking (NZ\$230,000.00)	11/2011 - 10/2012	Xu, X.	NZ Ministry of Science and Innovation
3	The Materials Accelerator (NZ\$8,500,00.00)	11/2009 - 10/2013	Taylor, M. Xu, X. others	NZ Ministry of Science and Innovation
4	Enabling Technology for Rapid Development of High Value-added Customised Products (NZ \$800,000.00)	06/2008 - 05/2011	Xie, S.Q. Xu, X. others	FRST