

Intelligent and Interoperable Manufacturing Systems (IIMS) PUBLICATIONS

Books

X. Xu., Integrating Advanced Computer-Aided Design, Manufacturing, and Numerical Control: Principles and Implementations, ISBN: 978-1-59904-714-0. 424 pages. IGI Global. January, 2009

X. Xu., Y.A.C.Nee. Advanced Design and Manufacturing Based on STEP, (Edited). November 2009. 505 pages. ISBN: 978-1-84882-738-7. Springer Veralag.

Book chapters

T. Kramer, X. Xu, STEP in a Nutshell, in Advanced Design and Manufacturing Based on STEP, edited by X. Xu and A. Y. C. Nee, pp 1-22. November 2009. ISBN: 978-1-84882-738-7. Springer Veralag.

J. Michaloski, T. Kramer, F. Proctor, X. Xu, S. Venkatesh, and D. Odendahl, STEPNC++ – An Effective Tool for Feature-based CAM/CNC, in Advanced Design and Manufacturing Based on STEP, edited by X. Xu and A. Y. C. Nee, pp 79-104. November 2009. ISBN: 978-1-84882-738-7. Springer Veralag.

X. Qiu, X. Xu., Information Sharing in Digital Manufacturing Based on STEP and XML, in Collaborative Design and Planning for Digital Manufacturing, edited by Lihui Wang and Andrew Y. C. Nee, pp 293-316. 2009. Springer Veralag. ISBN: 978-1-84882-286-3

K. Lee, X. Xu., 3D Digitization Methodologies of Cultural Artifacts. In Encyclopaedia of Information Science and Technology (Volume VIII), edited by Mehdi Khosrow-Pour, IGI Global, Hershey, PA 17033-1240, USA (2008). p 3750 -3756. ISBN-10: 1605660264. ISBN-13: 978-1605660264

M. Minhat, X. Xu, Characteristics and Technologies of Advanced CNC Systems, In Encyclopaedia of Information Science and Technology (Volume II), edited by Mehdi Khosrow-Pour, IGI Global, Hershey, PA 17033-1240, USA (2008). p519- 526

X. Xu, STEP into Distributed Manufacturing with STEP-NC, in Process Planning and Scheduling for Distributed Manufacturing, edited by Lihui Wang and Weiming Shen, pp. 2007. Springer Verlag

X. Xu, STEP-NC To Complete Product Development Chain, In Database Modeling for Industrial Data Management: Emerging Technologies and Applications, edited by Z. Ma, pp. 148-184, January 6, 2006. (Idea Group Publishing). ISBN 1-5914-0684-6 (hardcover)/1-5914-0685-4 (paperback)

Conference papers

Y.F. Zhao, F.M. Proctor, J.A. Horst, X. Xu, Merging machining and measurement for cognitive manufacturing, in: Proceedings of the ASME Design Engineering Technical Conference, 2010, pp. 353-361.

Y. Zhang, X. Bai, X. Xu, Y. Liu, RETRACTED ARTICLE: Understanding the STEP-NC data model for computer numerical control, in: Proceedings - 2nd IEEE International Conference on Advanced Computer Control, ICACC 2010, 2010, pp. 300-304.

J. Xu, X. Xu, S.Q. Xie, An integrated dual resource management and production planning system, in: Proceedings - 2010 IEEE 17th International Conference on Industrial Engineering and Engineering Management, IE and EM2010, 2010, pp. 728-732.

W.W. Wang, X.W. Xu, H.H. Hsiao, Proemotion - A tool to tell mobile phone's gender, in: ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 2010, pp. 347-354.

J. Mao, X. Xu, L. Wang, S. Newman, A statistic review of computer-aided process planning research, in: ASME 2010 International Manufacturing Science and Engineering Conference, MSEC 2010, 2010, pp. 513-531.

A.Z. Abdul Kadir, X. Xu, Smart machining simulation based on high-level data, in: ASME 2010 International Manufacturing Science and Engineering Conference, MSEC 2010, 2010, pp. 533-542.

Y.F. Zhao, X.W. Xu, S.Q. Xie, T.R. Kramer, F.M. Proctor, J.L. Michaloski, An integrated process planning system for machining and on-machine inspection, in: 2008 Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, DETC 2008, 2009, pp. 590-597.

Y.F. Zhao, X.W. Xu, S.Q. Xie, Reactive process planning - Incorporating machining, inspection, and feedback, in: Proceedings of the ASME International Manufacturing Science and Engineering Conference 2009, MSEC2009, 2009, pp. 201-210.

M. Minhat, X. Xu, Feature-based machining using function block technology, in: 2009 IEEE International Conference on Control and Automation, ICCA 2009, 2009, pp. 2398-2403.

M. Minhat, V. Vyatkin, X. Xu, S. Wong, Z. Al-Bayaa, A novel open CNC architecture based on STEP-NC data model and IEC 61499 function blocks, Robotics and Computer-Integrated Manufacturing, 25 (2009) 560-569.

Y.F. Zhao, X.W. Xu, S.Q. Xie, T.R. Kramer, F.M. Proctor, J.L. Michaloski, An integrated process planning system architecture for machining and On-Machine Inspection, in: Proceedings of the ASME Design Engineering Technical Conference, 2008, pp. 589-596.

S. Venkatesh, D. Odendahi, X. Xu, J. Michaloski, F. Proctor, T. Kramer, Validating portability of STEP-NC tool center programming, in: Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference - DETC2005, 2005, pp. 285-290.

X.W. Xu, J. Wang, Development of a G-Code free, STEP-compliant CNC lathe, in: American Society of Mechanical Engineers, Computers and Information in Engineering Division, CED, 2004, pp. 75-82.

X.W. Xu, Y. Wu, Dimension set recognition methodologies, in: Proceedings of the ASME Design Engineering Technical Conference, 2003, pp. 29-37.

Intelligent and Interoperable Manufacturing Systems (IIMS) PUBLICATIONS

X.W. Xu, A feature-based approach for representing composite components, in: Proceedings of the ASME Design Engineering Technical Conference, 2002, pp. 379-385.

X. Xu, Q. He, Step-NC to re-shape manufacturing industry, in: Proceedings of the 5th International Conference on Frontiers of Design and Manufacturing (ICFDM'2002), 2002, pp. 125-131.

D. Tony Liu, X. William Xu, A review of web-based product data management systems, Computers in Industry, 44 (2001) 251-262.

Journal Papers:

Y.F. Zhao, X. Xu, Enabling cognitive manufacturing through automated on-machine measurement planning and feedback, Advanced Engineering Informatics, 24 (2010) 269-284.

J. Xu, X. Xu, S.Q. Xie, A comprehensive review on recent developments in quality function deployment, International Journal of Productivity and Quality Management, 6 (2010) 457-494.

F. Ridwan, X.W. Xu, G. Liu, Generic feed-rate optimization based on a predicted power force model, in: Advances in Intelligent and Soft Computing, 2010, pp. 401-417.

M. Rauch, X. Xu, Five-axis machining: Technologies and challenges, International Journal of Manufacturing Research, 5 (2010) 327-352.

J.G. Campos, X.W. Xu, STEP-NC-compliant machine automation to support sawblade stone-cutting machining, International Journal of Manufacturing Research, 5 (2010) 58-73.

Y.F. Zhao, S. Habeeb, X. Xu, Research into integrated design and manufacturing based on STEP, International Journal of Advanced Manufacturing Technology, 44 (2009) 606-624.

F. Zhao, X. Xu, S.Q. Xie, Computer-Aided Inspection Planning-The state of the art, Computers in Industry, 60 (2009) 453-466.

Y. Zhang, M. Rauch, H. Xie, Y. Zhao, X. Xu, Y. Liu, STEP-compliant NC simulation system modeling, in: Applied Mechanics and Materials, 2009, pp. 683-687.

D. Yu, Y. Hu, X.W. Xu, Y. Huang, S. Du, An open CNC system based on component technology, IEEE Transactions on Automation Science and Engineering, 6 (2009) 302-310.

X.W. Xu, K. Jayaraman, An image-processing system for the measurement of the dimensions of natural fibre cross-section, International Journal of Computer Applications in Technology, 34 (2009) 115-121.

X. Xu, D. Song, J. Sun, J. Wang, Construct a repository of milling CNC system based on STEP-NC, Shenyang Jianzhu Daxue Xuebao (Ziran Kexue Ban)/Journal of Shenyang Jianzhu University (Natural Science), 25 (2009) 987-992.

X. Xu, Integrating advanced computer-aided design, manufacturing, and numerical control: Principles and implementations, 2009.

J. Wang, X. Xu, J. Sun, J. Tan, Step-NC based intelligent computing and machining, International Journal of Innovative Computing, Information and Control, 5 (2009) 2449-2462.

N.K. Surendran, X.W. Xu, O. Stead, H. Silyn-Roberts, Contemporary technologies for 3D digitization of maori and pacific island artifacts, International Journal of Imaging Systems and Technology, 19 (2009) 244-259.

A. Mokhtar, X. Xu, I. Lazcanotegui, Dealing with feature interactions for prismatic parts in STEP-NC, Journal of Intelligent Manufacturing, 20 (2009) 431-445.

M. Minhat, X. Xu, V. Vyatkin, STEPNCMillUoA: A CNC system based on STEP-NC and Function Block architecture, International Journal of Mechatronics and Manufacturing Systems, 2 (2009) 3-19.

K. Jayaraman, X.W. Xu, Life cycle assessment of products made of composite materials, International Journal of Product Lifecycle Management, 4 (2009) 11-22.

S. Habeeb, X. Xu, A novel CNC system for turning operations based on a high-level data model, International Journal of Advanced Manufacturing Technology, 43 (2009) 323-336.

F. Zhao, X. Xu, S. Xie, STEP-NC enabled on-line inspection in support of closed-loop machining, Robotics and Computer-Integrated Manufacturing, 24 (2008) 200-216.

W. Yang, X. Xu, Modelling machine tool data in support of STEP-NC based manufacturing, International Journal of Computer Integrated Manufacturing, 21 (2008) 745-763.

X. Xu, K. Mori, J. Ni, Special issue on recent advances in flexible automation, International Journal of Innovative Computing, Information and Control, 4 (2008) 485-488.

X. Xu, K. Jayaraman, C. Morin, N. Pecqueux, Life cycle assessment of wood-fibre-reinforced polypropylene composites, Journal of Materials Processing Technology, 198 (2008) 168-177.

Intelligent and Interoperable Manufacturing Systems (IIMS) PUBLICATIONS

- S.Q. Xie, X. Xu, STEP-compliant process planning system for compound sheet metal machining, *International Journal of Production Research*, 46 (2008) 25-50.
- J. Wang, X. Xu, J. Sun, R. Li, W. Wang, Development of an NC controller for next generation CNCs, *International Journal of Innovative Computing, Information and Control*, 4 (2008) 593-604.
- S.T. Newman, A. Nassehi, X.W. Xu, R.S.U. Rosso Jr, L. Wang, Y. Yusof, L. Ali, R. Liu, L.Y. Zheng, S. Kumar, P. Vichare, V. Dhokia, Strategic advantages of interoperability for global manufacturing using CNC technology, *Robotics and Computer-Integrated Manufacturing*, 24 (2008) 699-708.
- A. Nassehi, S.T. Newman, X.W. Xu, R.S.U. Rosso Jr, Toward interoperable CNC manufacturing, *International Journal of Computer Integrated Manufacturing*, 21 (2008) 222-230.
- W.Z. Yang, X. Xu, S.Q. Xie, Development of STEP-NC compliant machine tool data model, in: *Proceedings of the 35th International MATADOR 2007 Conference*, 2007, pp. 35-40.
- H. Wang, X. Xu, J.D. Tedford, An adaptable CNC system based on STEP-NC and function blocks, *International Journal of Production Research*, 45 (2007) 3809-3829.
- M. Segetin, K. Jayaraman, X. Xu, Harakeke reinforcement of soil-cement building materials: Manufacturability and properties, *Building and Environment*, 42 (2007) 3066-3079.
- X.W. Xu, L. Wang, Y. Rong, STEP-NC and function blocks for interoperable manufacturing, *IEEE Transactions on Automation Science and Engineering*, 3 (2006) 297-307.
- X.W. Xu, L. Song, Development of an integrated reverse engineering system, *International Journal of Computer Applications in Technology*, 25 (2006) 9-14.
- X. Xu, S.T. Newman, Making CNC machine tools more open, interoperable and intelligent—a review of the technologies, *Computers in Industry*, 57 (2006) 141-152.
- X.W. Xu, Realization of STEP-NC enabled machining, *Robotics and Computer-Integrated Manufacturing*, 22 (2006) 144-153.
- X. Xu, P. Klemm, F. Proctor, S.H. Suh, STEP-compliant process planning and manufacturing, *International Journal of Computer Integrated Manufacturing*, 19 (2006) 491-494.
- X. Xu, J.L.Q. Chen, S.Q. Xie, Framework of a product lifecycle costing system, *Journal of Computing and Information Science in Engineering*, 6 (2006) 69-77.
- S.Q. Xie, X. Xu, A STEP-compliant process planning system for sheet metal parts, *International Journal of Computer Integrated Manufacturing*, 19 (2006) 627-638.
- H. Wang, X.W. Xu, J. Des Tedford, Making a process plan adaptable to CNCs, *International Journal of Computer Applications in Technology*, 26 (2006) 49-58.
- T.R. Kramer, F. Proctor, X. Xu, J.L. Michaloski, Run-time interpretation of STEP-NC: Implementation and performance, *International Journal of Computer Integrated Manufacturing*, 19 (2006) 495-507.
- X.W. Xu, H. Wang, J. Mao, S.T. Newman, T.R. Kramer, F.M. Proctor, J.L. Michaloski, STEP-compliant NC research: The search for intelligent CAD/CAPP/CAM/CNC integration, *International Journal of Production Research*, 43 (2005) 3703-3743.
- X.W. Xu, R. Galloway, Using behavioral modeling technology to capture designer's intent, *Computers in Human Behavior*, 21 (2005) 395-405.
- X.W. Xu, Novel surface and volumetric feature interactions for process planning, *International Journal of Computer Applications in Technology*, 24 (2005) 185-194.
- S.Q. Xie, X. Xu, Y.L. Tu, A reconfigurable platform in support of one-of-a-kind product development, *International Journal of Production Research*, 43 (2005) 1889-1910.
- S.G. Lee, X. Xu, Design for the environment: Life cycle assessment and sustainable packaging issues, *International Journal of Environmental Technology and Management*, 5 (2005) 14-41.
- X.W. Xu, Q. He, Striving for a total integration of CAD, CAPP, CAM and CNC, *Robotics and Computer-Integrated Manufacturing*, 20 (2004) 101-109.
- X. Xu, M. Duhovic, Computer-aided concurrent environment for manufacturing education, *International Journal of Engineering Education*, 20 (2004) 543-551.
- S.G. Lee, X. Xu, A Simplified Life Cycle Assessment of Re-usable and Single-use Bulk Transit Packaging, *Packaging Technology and Science*, 17 (2004) 67-83.
- X.W. Xu, T. Liu, A web-enabled PDM system in a collaborative design environment, *Robotics and Computer-Integrated Manufacturing*, 19 (2003) 315-328.
- X.W. Xu, R. Galloway, Environmental impact assessment of bathroom products, *International Journal of Environmental Technology and Management*, 3 (2003) 166-184.

Intelligent and Interoperable Manufacturing Systems (IIMS) PUBLICATIONS

- Y.B. Bai, X.W. Xu, Object Boundary Encoding - A new vectorisation algorithm for engineering drawings, *Computers in Industry*, 46 (2001) 65-74.
- X.W. Xu, Y.B. Bai, Computerizing scanned engineering documents, *Computers in Industry*, 42 (2000) 59-71.
- X.W. Xu, Q. Shi, Plastics forming processes and the applications of CAD/CAM technology, *Transactions of the Institution of Professional Engineers New Zealand. Electrical, Mechanical, and Chemical Engineering Section*, 26 (1999) 33-42.
- X. Xu, S. Hinduja, Recognition of rough machining features in 2D/3D components, *CAD Computer Aided Design*, 30 (1998) 503-516.
- J.J. Ding, X.W. Xu, Development of an electro-mechanical prototype system to aid steel wire drawing process, in: *American Society of Mechanical Engineers (Paper)*, 1998, pp. 1-5.
- X. Xu, S. Hinduja, Determination of finishing features in 2D/3D components, *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 211 (1997) 125-142.

