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PUBLICATIONS

BOOK

1. Shin, Y. C. and **Xu, C.**, *Intelligent Systems: Modeling, Optimization and Control*, CRC Press, Taylor & Francis, 2008.
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BOOK CHAPTERS

1. Jackson, M. J., Ahmed, W. and **Xu, C.**, *Fundamentals of Machining*, Machining with Nanomaterials, Springer, 2008.
 2. Jackson, M. J., Evans, J., **Xu, C.** and Ahmed, W., *Formation of Nanostructured Metals*, Machining with Nanomaterials, Springer, 2008.
 3. **Xu, C.**, *Persistence, Consistence and Patience*, Tips on Getting an Academic Position, Lulu Web Publisher, 2009.
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JOURNAL PUBLICATIONS

– Published and Accepted

1. **Xu, C.** and Huan, J., 2001, “An Automatic Monitoring System on the Fault Diagnosis of NC machine Based on Internet Explorer”, *Mechanical Engineer*, No. 4, pp. 21-23.
2. **Xu, C.** and Shin, Y. C., 2005, “Design of a Multi-level Fuzzy Controller for Nonlinear Systems and Stability Analysis”, *IEEE Transactions on Fuzzy Systems*, Vol. 13, No. 6, pp. 761-778.
3. **Xu, C.** and Shin, Y. C., 2007, “Control of Cutting Force for Creep-feed Grinding Processes using a Multi-level Fuzzy Controller”, *ASME Transaction, Journal of Dynamic Systems, Measurement and Control*, Vol. 129, No. 4, pp. 480-492.
4. **Xu, C.** and Shin, Y. C., 2007, “Interaction Analysis for Multi-Input Multi-Output Nonlinear Systems based on a FBFN model”, *Fuzzy Sets and Systems*. Vol. 158, No. 18, pp. 2013-2025.
5. **Xu, C.** and Shin, Y. C., 2008, “An Adaptive Fuzzy Controller for Constant Cutting Force in End-Milling Processes”, *ASME Transactions, Journal of Manufacturing Science and Engineering*, Vol. 130, pp. 031001-1-10.
6. **Xu, C.** and Shin, Y. C., 2008, “A Fuzzy Inverse Model Construction Method for General Monotonic Multi-Input Single-Output Systems”, *IEEE Transactions on Fuzzy Systems*, Vol. 16, No. 5, pp. 1216-1231.
7. Knipe, K., **Xu, C.** and Jackson, M. J., 2008, “Finite Element Modelling and Vibration Control of a Tetrahedral Space Frame Applied to Micromachining”, *International Journal of Nano and Biomaterials*, Vol. 1, No. 4, pp. 448-458.
8. Allen R. and **Xu, C.**, 2008, “Cooperative Navigation and Adaptive Guidance”, *The Bulletin of Military Operations Research: Phalanx*, Vol. 41, No. 4, pp. 12-17.

9. **Xu, C.** and Shin, Y. C., 2009, "A Stable Hierarchical Fuzzy Control Design for Certain Nonlinear Systems based on Input-output passivity theory", *Control and Intelligent Systems*, Vol. 37, No. 2, pp. 2012006-2012041.
10. Tang, Y., **Xu, C.** and Jackson, M. J., 2009, "Adaptive Compensation of Tool Deflection in Micromachining Processes", *International Journal of Nanomanufacturing*, Vol. 3, No. 1&2, pp. 159-168.
11. **(Invited, Special Issue on 'Grinding Wheel Technology) Xu, C.,** Tang, Y. and Jackson, M. J., 2009, "Survey on Various Control Techniques in Micro Grinding Processes", *International Journal of Nanomanufacturing*, Vol. 3, No. 4, pp. 398-408.
12. Jackson, M. J., Whitfield, M. D., **Xu, C.** and Ahmed, W., 2009, "Diamond Coated Microtools for Machining Compact Bone", *International Journal of Nano and Biomaterials*, Vol. 2, No. 6, pp. 505-519.
13. Jackson, M. J., **Xu, C.** and Ahmed, W., 2009, "A Multifunctional High-speed Spindle for Micromachining Medical Materials", *International Journal of Nano and Biomaterials*, Vol. 2, No. 6, pp. 520-539.
14. Jackson, **Xu, C.,** M. J., Whitfield, M. D., Ahmed, W., Taylor, H. and Sein, H., 2009, "Computational Analysis of the Micromilling of 316L Stainless Steel", Accepted, *International Journal of Nano and Biomaterials*.
15. **Xu, C.** and Shin, Y. C., 2009, "Adaptive Control of Cutting Force for End Milling Processes with System Variations using Self-tuning Fuzzy Technique", Accepted, *ASME/IEEE Transactions on Mechatronics*.

–Under Review

16. **Xu, C.** and Shin, Y. C., 2009, "A Multi-level Fuzzy Control Design for general Nonlinear Multi-Input Single-Output Systems", In review, *IEEE Transactions on Control Systems Technology*.
17. **Xu, C.** and Shin, Y. C., 2009, "A Multivariable Fuzzy Controller for General Multi-Input Multi-Output Nonlinear Systems", In review, *Fuzzy Sets and Systems*.
18. Allen, R., Lin, K. and **Xu, C.,** 2009, "Robust Estimation of a Maneuvering Target from Multiple Unmanned Air Vehicles' Measurements", In review, *Journal of Navigation, The Institute of Navigation*.
19. Yang, M., **Xu, C.,** Chao, Y. J., Lin, K., Yang, H. and An, L., 2009, "Fabrication of AA6061/Al₂O₃Nano Ceramic Particle Reinforced Composite Coating by Using Friction Stir Processing", In review, *Surface and Coating Technology*.
20. Allen, R. and **Xu, C.,** 2009, "Dual mode and adaptive guidance to intercept maneuvering targets with acceleration-constrained munitions", In review, *American Institute of Aeronautics and Astronautics (AIAA)*.

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– Published

1. **Xu, C.** and Shin, Y. C., 2006, "Adaptive Control of Cutting Force for End Milling Processes with System Variation using Self-tuning Fuzzy Technique", *ASME International Mechanical Engineering Congress and Exposition*, Paper No. IMECE 2006-13758. Chicago, IL.
2. **(Best paper in session) Xu, C.** and Shin, Y. C., 2006, "A Hierarchical Self-tuning Fuzzy Controller for General Nonlinear Systems with Stability Analysis", *The 3rd International*

Conference on Cybernetics and Information Technologies Systems and Applications, Volume III, pp. 101-106, Orlando, FL.

3. **Xu, C.** and Shin, Y. C., 2007, "A Fuzzy Inverse Model Construction Method for a General MISO System with a Monotonic Input-Output Relationship", *Proceedings of 2007 North American Fuzzy Information Processing Society, NAFIPS'07*, pp. 1-6, June 24-27, San Diego, CA.
4. **Xu, C.** and Shin, Y. C., 2008, "A Multi-level Fuzzy Control Design for General Nonlinear Multi-Input Single-Output Systems", *Proceedings of 2008 North American Fuzzy Information Processing Society, NAFIPS'08*, May 19-22, New York, NY.
5. Shamieh, F. and **Xu, C.**, 2009, "Generation of Optimal Functions using Particle Swarm Method over Discrete Intervals", *Proceedings of 2009 Annual Meeting of the North American Fuzzy Information Processing Society, NAFIPS'09*, Cincinnati, OH.
6. Tang, Y. and **Xu, C.**, 2009, "Geometrical Adaptive Controller for Tool Deflection Compensation in Helical End Milling Processes", *ASME International Manufacturing Science and Engineering Conference, MSEC 2009-84218*, Oct. 4-7, West Lafayette, IN.
7. Joslin, A. and **Xu, C.**, 2009, "A Hybrid Modeling Technique for Partially-Known Systems using Linear Regression and Neural Network", *ASME International Manufacturing Science and Engineering Conference, MSEC 2009-84217*, Oct. 4-7, West Lafayette, IN.
8. Idahosa, U., Saha, A., **Xu, C.** and Basu, S., 2009, "Frequency Response Characterization of Swirl Stabilized Flames Dynamics", *Proceedings of the 6th US National Combustion Meeting of the Combustion Institute*, May 17-20, Ann Arbor, MI.
9. Idahosa, U., S. Abhishek, Joslin, A., Basu, S., **Xu, C.**, 2009, "Flame Response to Equivalence Ratio Oscillations in Perturbed Swirl Stabilized Flames", *ASME Turbo Expo 2009 – Combustion Dynamics, GT2009-59311*, June 8-12, 2009, Orlando, FL.
10. Idahosa, U., Saha, A., **Xu, C.** and Basu, S., 2009, "Characterization of Combustion Dynamics in Swirl Stabilized Flames", *Proceedings of Power2009, ASME Power 2009-81168*, July 21-23, Albuquerque, New Mexico, USA.

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11. Knipe, K. and **Xu, C.**, 2009, "Benchmark Comparison of a Positive Position Feedback Controller with and without a Phase Shift Applied to a Cantilever Beam with Piezoelectric Actuators", *ASME Conference on Smart Materials, Adaptive Structures & Intelligent Systems, SMASIS 09*, Sep. 20-24, Oxnard, CA.
12. Idahosa, U., **Xu, C.** and Basu, S., 2009, "Equivalence Ratio and Swirl-Intensity Effects on Combustion Dynamics in Acoustically Perturbed Diffusion Flames".
13. Liu, J., **Xu, C.** and An, L., 2009, "Micro-machinable polymer-derived ceramics sensors for high-temperature applications", *ASME Conference on Smart Materials, Adaptive Structures & Intelligent Systems, SPIE Smart structure/NDE conference, Sensors and smart structures technologies for civil, mechanical, and aerospace systems*, March 7-11, 2010, San Diego, CA.