

# Ni Sheng



Position : Assistant Dean/Associate Professor  
Faculty : School of Business  
Email Address : nis@must.edu.mo  
Telephone : (853) 8897-2870  
Fax No. : (853) 2882-3281  
Office : A313  
Mailing Address : Avenida Wai Long, Taipa, Macau

**Teaching and Research Areas:** My teaching areas include Statistics, Decision Modeling, Operations Management, Econometrics, Calculus and Linear Algebra; My current research focuses on environmental modeling for environmental management and decision support.

## **Academic Qualifications**

2006 - 2007 Postdoctoral Scholar / University of California, Berkeley  
2002 - 2005 Ph.D / The University of Hong Kong  
1998 - 2000 M.Eng / Nanyang Technological University, Singapore  
1991 - 1995 B.Sc / Civil Engineering / Zhejiang University

## **Teaching Experiences**

2013 - Present Assistant Dean / School of Business / Macau University of Science and Technology  
2012 - Present Associate Professor / School of Business / Macau University of Science and Technology  
2007 - 2012 Assistant Professor / Macau University of Science and Technology  
2005 - 2006 Research Associate / The University of Hong Kong  
2000 - 2002 Research Engineer / Data Storage Institute, National University of Singapore

## **Representative Publications**

### *Journal Articles:*

1. Choy KL, **Sheng N**, Lam HY, Lai IKW, Chow KH, Ho GTS. Assess the Effects of Different Operations Policies on Warehousing Reliability. International Journal of Production Research (accepted). [SCIE]
2. **Sheng N**, Tang UW. Zhuhai. Cities: The International Journal of Urban Policy and Planning, 2013, 32: 70-79. [SSCI]
3. **Sheng N**, Tang UW. Risk assessment of traffic-related air pollution in a world heritage city. International Journal of Environmental Science and Technology, 2013, 10: 11-18. [SCIE]
4. **Sheng N**, Tang UW. A building-based data capture and data mining technique for air quality assessment. Frontiers of Environmental Science & Engineering, 2011, 5: 543-551. [SCIE]

5. **Sheng N**, Tang UW. Spatial analysis of urban form and pedestrian exposure to traffic noise. *International Journal of Environmental Research and Public Health*, 2011, 8: 1977-1990. [SCIE]
6. **Sheng N**, Li SF. A multi-scale non-equilibrium molecular dynamics algorithm and its applications. *International Journal of Applied Mechanics*, 2009, 1: 405-420. [SCIE]
7. Tang UW, **Sheng N**. Macao. *Cities: The International Journal of Urban Policy and Planning*, 2009, 24: 220-231. [SSCI]
8. Li SF, **Sheng N**. On Multiscale Non-equilibrium Molecular Dynamics Simulations. *International Journal for Numerical Methods in Engineering*, 2010, 83(8-9): 998-1038. [SCI]
9. Wu D, Lo SH, **Sheng N**, Sze KY. Universal three-dimensional connection hexahedral elements based on hybrid-stress theory for solid structures. *International Journal for Numerical Methods in Engineering*, 2010, 81(3): 307-334. [SCI]
10. **Sheng N**, Li SF. A non-equilibrium multiscale simulation of shock wave propagation. *Mechanics Research Communications*, 2008, 35: 10-16. [SCI]
11. Li SF, **Sheng N**, Liu XH. A non-equilibrium multiscale simulation paradigm. *Chemical Physics Letters*, 2008, 451: 293-300. [SCI]
12. Liu XH, Li SF, **Sheng N**. A cohesive finite element for quasi-continua. *Computational Mechanics*, 2007, 42: 543-553. [SCI]
13. **Sheng N**, Sze KY, Cheung YK. Trefftz solutions for piezoelectricity by Lekhnitskii's formalism and boundary-collocation method. *International Journal for Numerical Methods in Engineering*, 2006, 65: 2113-2138. [SCI]
14. **Sheng N**, Sze KY. Multi-region Trefftz boundary element method for fracture analysis in plane piezoelectricity. *Computational Mechanics*, 2006, 37: 381-393. [SCI]
15. Sze KY, **Sheng N**. Polygonal finite element method for nonlinear constitutive modeling of polycrystalline ferroelectrics. *Finite Elements in Analysis & Design*, 2005, 42: 107-129. [SCI]
16. Jin WG, **Sheng N**, Sze KY, Li J. Trefftz indirect methods for plane piezoelectricity. *International Journal for Numerical Methods in Engineering*, 2005, 63: 139-158. [SCI]
17. Sze KY, Chen JS, **Sheng N**, Liu XH. Stabilized conforming nodal integration: exactness and variational justification. *Finite Elements in Analysis & Design*, 2004, 41: 147-171. [SCI]
18. Fan SC, **Sheng N**. Meshless formulation using NURBS basis functions for eigenfrequency changes of beam having multiple open-cracks. *Journal of Sound and Vibration*, 2004, 269: 781-793. [SCI]
19. Sze KY, Jin WG, **Sheng N**, Li J. Trefftz methods for plane piezoelectricity. *Computer Assisted Mechanics & Engineering Sciences*, 2003, 10: 619-627.
20. Hua W, **Sheng N**, Liu B. ABS designs for load/unload and shock resistance. *IEICE Transactions on Electronics*, 2002, E85-C, No. 10: 1789-1794. [SCI]
21. **Sheng N**, Yam CH, Iu VP. Analytical investigation and the design of the compressive strength of steel gusset plate connections. *Journal of Constructional Steel Research*, 2002, 58: 1473-1493. [SCI]

*Book Chapters:*

1. Tang UW, **Sheng N**, Wang ZS. Mobile laboratories for particle and gaseous pollutants. (Chapter 7) In: "Traffic Related Air Pollution and Internal Combustion Engines" (Editors: S. Demidov and J. Bonnet). Nova Science Publishers, 2009. (ISBN: 978-1-60741-145-1)
2. Tang UW, **Sheng N**, Wang ZS. Building Form and Air Pollution in Compact City: A Review for the Macao Peninsula. (Chapter 11) In: "Buildings and the Environment" (Editors: J. Nemecek and P. Schulz). Nova Science Publishers, 2009. (ISBN: 978-1-60876-128-9)

*Conference Proceedings:*

1. **Sheng N**, Hua W, Liu B. Slider and HGA designs for both smooth load/unload operation and high shock resistance. *Magnetics Conference, 2002. INTERMAG Europe 2002. Digest of Technical Papers. 2002 IEEE International*, April-May 2002, Pages AD11.
2. Hua W, **Sheng N**, Liu B. ABS designs for load/unload and shock resistance. *Proceeding of the 6th Asian Symposium on Information Storage Technology*, November 2001, Shanghai, Pages 153-158.
3. **Sheng N**, Fan SC. Meshless finite element method to solve boundary-value problems. *Proceeding of the 4th Asia-Pacific Conference on Computational Mechanics*, December 1999, Singapore, Pages 961-966.
4. Yam CH, **Sheng N**, Iu VP, Cheng JJR. Analytical study of the compressive behavior and strength of steel gusset plate connections. *Proceeding of the 26th Annual Conference of Canadian Society for Civil Engineering*, June 1998, Halifax, Canada, Pages 97-106.

**Research Projects**

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| 2013 - 2015 | High-Resolution Traffic Noise Mapping in the Macao Peninsula (Funded by Macau Science and Technology Development Fund, Principal Investigator)     |
| 2012 - 2013 | Impacts of Environmental Elements on Residential Property Values in Macao (Funded by Macau Foundation, Principal Investigator)                     |
| 2012 - 2013 | Survey for Residential Status in the Neighborhood of Kou Lou (Project commissioned by the Land, Public Works and Transport Bureau, Macao SAR)      |
| 2010 - 2011 | Survey for Residential Status in the Neighborhood of Barra (Project commissioned by the Land, Public Works and Transport Bureau, Macao SAR)        |
| 2010 - 2011 | Public Environmental Awareness Survey in Macao (Project commissioned by the Environmental Protection Bureau, Macao SAR)                            |
| 2009 - 2010 | Survey for Residential Status in the Neighborhood of Ha Wan (Project commissioned by the Land, Public Works and Transport Bureau, Macao SAR)       |
| 2009 - 2010 | Environmental Economic Assessment of Macao Light Rail Transit System (Project commissioned by the Transportation Infrastructure Office, Macao SAR) |
| 2009 - 2011 | Study and Practice of Bilingual Teaching in Calculus (Funded by Macau Foundation, Principal Investigator)  |

