

Curriculum Vitae

NAME: Dr. Jinling Wang

ADDRESS: School of Surveying & Spatial Information Systems
The University of New South Wales
Sydney NSW. 2052
Australia

Tel: 02-93854203
Fax: 02-93137493
Mobile : 0400 463 668
Email: Jinling.Wang@unsw.edu.au
Website: www.gmat.unsw.edu.au/wang

Education

Ph.D. (8/1999), Curtin University of Technology, Australia.
M.Sc. (7/1990), Wuhan Technical University of Surveying & Mapping, PRC.
B.Sc. (7/1983), Wuhan Technical University of Surveying & Mapping, PRC.

Brief Biography

- **January 2004-**: Senior Lecturer (continuing) and Coordinator of Postgraduate Studies (Since 15 March 2007, Director of Postgraduate Studies), School of Surveying and Spatial Information Systems, the University of New South Wales (UNSW), Sydney, Australia.
- **January-December 2003**: Lecturer and Postgraduate Coordinator, School of Surveying and Spatial Information Systems, the University of New South Wales (UNSW), Sydney, Australia.
- **January 2000 – December 2002**: Australian Research Council Research Fellow (*promoted to Lecturer position, effective 1.1.2002*), hosted in the School of Surveying and Spatial Information Systems, the University of New South Wales (UNSW), Sydney, Australia.
- **March 1999 – December 1999**: Postdoctoral Research Associate, Department of Spatial Sciences, Curtin University of Technology, Perth, Australia.
- **March 1996 – February 1999**: Ph.D candidate, Department of Spatial Sciences, Curtin University of Technology, Perth, Australia.
- **September 1993 – February 1996**: Associate Professor, Department of Engineering Surveying, Wuhan Technical University of Surveying and Mapping (WTUSM), Wuhan, PR. China. [Served as Department's coordinator for postgraduate studies and research for a year before taking the academic leaves in Hong Kong].
- **September 1990 – September 1993**: University Lecturer, Department of Engineering Surveying, Wuhan Technical University of Surveying and Mapping (WTUSM), Wuhan, PR. China.
- **September 1987 – August 1990**: M.Sc candidate (research student), Department of Engineering Surveying, Wuhan Technical University of Surveying and Mapping (WTUSM), Wuhan, PR. China.
- **August 1983 – August 1987**: Associate Lecturer, Department of Engineering Surveying, Wuhan Technical University of Surveying and Mapping (WTUSM), Wuhan, PR. China.

- **September 1979 – July 1983:** Undergraduate student, Department of Engineering Surveying, Wuhan Technical University of Surveying and Mapping (WTUSM), Wuhan, PR. China.

The following periods are on-leave from Wuhan Technical University of Surveying and Mapping (WTUSM):

- **December 1995 - February 1996:** Research Student, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University (HK PolyU), Hong Kong.
- **November 1994 – August 1995:** Research Assistant, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, (HK PolyU), Hong Kong.

Research Experience

2000 - now Research projects on modelling, quality control, algorithm and software development for GPS, Glonass, Galileo, Pseudolites, INS as well as their integration, at the School of Surveying and Spatial Information Systems, University of New South Wales (UNSW), Australia.

Recent Research Projects:

- UNSW-ADFA International Collaboration Grant (2008-2009): "Vision aided multi-sensing for airborne navigation and terrain following", (J. Wang, M. Garratt, A. Lambert and R. Shibasaki).
- Australian Research Council (ARC) Discovery Project (2008-2010): "Dynamic Receiver Autonomous Integrity Monitoring for Multi-Constellation Global Navigation Satellite Systems" (J. Wang, PJG Teunissen, G Hein).
- UNSW-ADFA Research Collaboration Initiative Grant (2007-2008): "Integration of GPS, Inertial and Vision Sensors to Navigate Unmanned Aerial Vehicles", (J. Wang & A. Lambert).
- UNSW GoldStar research project: (2007) Robust Autonomous Integrity Monitoring for Next Generation GNSS Receivers (J Wang).
- Australian Research Council (ARC) Linkage Project (2006-2009): "Sensor Integration for Low Cost Robust Machine Automation" (A.G. Dempster, C. Rizos, J. Wang, D. Brezinska).
- Australian Research Council (ARC) Linkage APAI Project (2005-2007): "Monitoring & Predicting Near Real Time Ionospheric Activities with Multi-Satellite Data" (J. Wang, D.G. Cole, S.G. Jin).
- Hong Kong Research Grants Council (HK RGC: 2005-2007): "Development of Pseudolite Augmented GPS Technique for Precise Surveys" (Y Chen, W Chen, A Chrzanowski, J Wang, X He).
- Australian Research Council (ARC)-Linkage LIEF (2005): "A Signal Simulator Facility for GNSS Receiver Design and Testing" (C. Rizos, J. Wang, J. Choi, K. Kubik & B. Mojarrabi).
- Australian Research Council (ARC) Discovery Project (2004-2006): "Robust Positioning Based on Ultra-Tight Integration of GPS, Pseudolites and Inertial Sensors" (J. Wang & J. Choi).
- Co-operative Research Centre for Spatial Information Project 1.3 (2004-2007): "Integrated Positioning and Geo-referencing Platform" (J. Wang as project leader).
- FRG (Faculty Research Grant) (2004) "Quality Control for GNSS Receiver Autonomous Integrity Monitoring" (J. Wang & S. Hewitson).
- Australian Research Council (ARC) Linkage APAI Project (2004-2007): "Integration of GPS/Pseudolite/INS to Geo-Reference Airborne Surveying and Mapping Sensors" (J. Wang & A.H.W. Kearsley).
- Australian Research Council (ARC) Discovery Project (2003-2004): "Stochastic Modelling for High Precision GPS Positioning Applications"

(J. Wang).

- Australian Research Council (ARC) Linkage APAI Project (2003-2005) "An Augmented-GPS Software Receiver for Indoor/Outdoor Positioning" (C. Rizos & J. Wang).
- FRG (Faculty Research Grant) (2003) "Optimisation of Trajectory and Dynamics for Integrated GPS/INS Systems" (J. Wang & H.K. Lee).
- URSP (University Research Support Program) (2002): "Stochastic Assessment of High Precision GPS Positioning" (J. Wang).
- URSP (University Research Support Program) (2001): "GPS/INS/Pseudolite Integration for Precise Positioning and Attitude Determination", in collaboration with the Center for Mapping, Ohio State University. (J. Wang, D. Brezinska, & CK. Toth).
- Australian Research Council SPIRT (industry collaboration) grant (2001-2003): "An Integrated GPS and Pseudolite Surveying System for Steelwork Applications", (C. Rizos & J. Wang).
- Australian Research Council (ARC) Research Fellowship (2000-2002): "The Integrated Analysis of GPS and Glonass Measurements for Precise Real-Time Positioning" (J. Wang).

- 1999 Research projects in the areas of GPS, Glonass and INS, at the Department of Spatial Sciences, Curtin University of Technology, Australia, with A/Prof. Mike P. Stewart and Dr. Maria Tsakiri.
- 1994 - 1996 Research project "Generalized Reliability Measures of Observations", funded by the National Natural Science Foundation of China. (*Research award for excellent young scientists in China*).
- 1994 - 1995 (on-leave from WTUSM), research project "Development of the Methodologies for Precise Surveying" at the Department of Surveying and Geo-Informatics, Hong Kong Polytechnic University, Hong Kong, with Prof. Y.Q. Chen.
- 1990 - 1993 Research project "Optimal Design of Deformation Monitoring" funded by the Education Ministry of China (with Prof. Dr. Z. Zhang).
- 1987 - 1989 Research project "Computer-aided Digital Mapping", funded by the National Bureau of Surveying and Mapping, P.R. China (with Prof. Z. Pan).

Teaching and Supervising Experience

- 2004- Having supervised 5 PhD students to completion; and currently supervise 5 PhD students and one MPhil research student. Supervised three postdoctoral researchers, and one fractional research assistant.
- 2006 Instructor/Speaker for the Workshop on Integration of GPS and INS: Principles, Implementation, and Applications, Holiday Inn Surfers Paradise, Gold Coast, Australia, 18 July 2006.
- 2003 - Lecturer for the subjects: 1) GMAT 2700: Geometry of Coordinate Reference Systems; 2) GMAT3700/9212: Precise GPS Positioning; 3) GMAT9211: Modern Geodesy and Applications 4) GMAT9205: Fundamentals of Geo-Positioning; 5) GMAT2120: Surveying 2 (EDM Component); Guest lecturer for GMAT0411: Surveying in Building and Construction; GMAT4910/4900, and GMAT2300.
- 2001-2002 Lecturing on the topics: Inertial Navigation Systems (INS)/Dead Reckoning, Glonass, Galileo, GPS/INS Integration, Least Squares, Space Geodesy for the courses GMAT4910, GMAT2300, GMAT9221 at UNSW.
- 2000-now Supervising 8 and co-supervising 6 Ph.D. students (from Australia, India, Thailand, Malaysia, South Korea, China & Kenya) in the areas of surveying, GPS geodesy, pseudo-satellites, inertial navigation system applications and spatial information systems at the University of New South Wales, Australia (see joint publications with these students).

- 1999 Lecturing and tutoring (part of the duties of a Research Associate), School of Spatial Sciences, Curtin University of Technology, Australia.
- 1993 Teaching research project “Computer-aided Teaching Methodology Development”, funded by WTUSM, P.R. China.
- 1983 - 1996 Lecturing and tutoring at Wuhan Technical University of Surveying & Mapping (WTUSM), P.R. China. Major teaching duties are the courses for Year 3 and 4, such as:
- Precise Engineering Surveying (Year 4)
 - Optimization and Design of Geodetic Networks (Year3/4)

Industry Experience and Consultancy

- 2007- 1) GNSS Data Analysis, Consultancy to Leica Geo-systems, Brisbane, Australia.
2) Human Motion Monitoring with GPS/INS, Consultancy to GPSports, Canberra, Australia
- 2000 - now Collaborative research and development with industry partners in Australia, particularly through the Cooperative Research Centre for Spatial Information (CRC-SI) project 1.3, several ARC Linkage projects as well as industry related honours projects.
- 1988 –1995 Consulting to industry and government agencies in the fields of geodetic control, positioning and navigation, modelling, data processing and software development.
- 1991 On-site consultant and technical support in the first digital large-scale mapping experiment in Hainan, P.R. China (with the National Bureau of Surveying & Mapping, P.R. China, on-leave from WTUSM).
- 1987 On-site consultant and chief-surveyor for the construction project of the China International Trade Centre in Beijing (with a Japanese construction company and the First China Construction Corp., Beijing, on-leave from WTUSM.)

Other Scholarly Activities

Guest Professor of Wuhan University (one of top research intensive universities in China), PR. China.

Guest Professor of China University of Mining and Technology, PR. China.

Guest Professor

State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS), PR China.

Founding Editor-in-Chief (2002-2007)

Journal of Global Positioning Systems, an international journal and official publication of CPGPS (<http://www.cpgps.org>)

Director of Postgraduate Studies

School of Surveying and Spatial Information Systems, UNSW

Member of Faculty Higher Degree Committee (HDC)

Faculty of Engineering, UNSW

Member of Faculty Postgraduate Coursework Education Committee (PGCEC)

Faculty of Engineering, UNSW

Chairperson

Strategic Planning Committee on Postgraduate Coursework Programs, School of Surveying and Spatial Information Systems, UNSW, 2003

Conference Convener

2004 International Symposium on GPS/GNSS, 6-8 December 2004, Sydney, Australia.
<http://www.gnss2004.org>

Technical (Track) Chair

The 21st Int. Tech. Meeting of the Satellite Division of the [U.S. Inst. of Navigation](http://www.ion.org), Savannah, Georgia, 16-19 September 2008. <http://www.ion.org/meetings/gnss2008program.cfm>

Member of Scientific/Program Committees

Member of the Scientific Committee, The second International Symposium on Geodesy for Geotechnical and Structural Engineering, May 21-24, 2002, Berlin, Germany.

Member of the Program Committee, The 1st Int. Symp. on Geo-information for Disaster Management, 21-23 March 2005, Delft, The Netherlands.

Member of the Program Committee, The 13th Int. Conf. on Geoinformatics - GeoInformatic05, 17-19 August 2005, Toronto, Canada.

Member of the International Programme Committee of the International Symposium on GPS/GNSS, 8-10 December 2005, Hong Kong.

Member of the International Programme Committee of the "2006 Int. Symp. on GPS/GNSS & 12th IAIN World Congress", Jeju, Korea, 18-20 October.

Member of the Scientific Committee of the "[5th International Symp. on Mobile Mapping Technology](http://www.gnss2007.com)", Padua, Italy, 29-31 May 2007.

Member of GNSS International Committee for the Joint International Symposium and Exhibition on Geoinformation (ISG) 2007 & International Symposium on GPS/GNSS 2007 (ISG/GNSS 2007), Johor Bahru, Malaysia, 5 – 7 November 2007. <http://www.isg-gnss07.com/organizers.htm>

Conference Session (Co-) Chairs

- European Geophysical Society Meeting, April 24-29, 2000, Nice, France.
- The Second International Symposium on Geodesy for Geotechnical and Structural Engineering, May 21-24, 2002, Berlin, Germany.
- International Conference on Global Navigation Satellite Systems (GNSS-2002), May 26-30, 2002, Copenhagen, Denmark.
- The 15th Int. Tech. Meeting of the Satellite Division of the U.S. Inst. of Navigation, September 24-27, 2002, Portland, Oregon, USA.
- 2002 International Symposium on GPS/GNSS, November 6-8, 2002, Wuhan, China.
- International Conference on Global Navigation Satellite Systems (GNSS-2003), April 22-25, 2003, Graz, Austria.
- The 17th Int. Tech. Meeting of the Satellite Division of the U.S. Inst. of Navigation, ION GNSS2004, September 21-24, 2004, Long Beach, California, USA.
- 2004 International Symposium on GPS/GNSS, 6-8 December 2004, Sydney, Australia.
- 2005 European Navigation Conference - GNSS2005, 19-22 July, Munich, Germany.
- International Symposium on GPS/GNSS, 8-10 December 2005, Hong Kong.

- The US Institute of Navigation's National Technical Meeting: ION NTM2006, 18-20 January 2006, Monterey, California, USA.
- The 19th Int. Tech. Meeting of the Satellite Division of the [U.S. Inst. of Navigation](#), Fort Worth, Texas, 26-29 September 2006.
- 2006 Int. Symp. on GPS/GNSS & 12th IAIN World Congress, Jeju, Korea, 18-20 October.
- The US Institute of Navigation's National Technical Meeting: ION NTM2007, 22-24 January 2007, San Diego, California, USA.
- GNSS International Committee for the Joint International Symposium and Exhibition on Geoinformation (ISG) 2007 & International Symposium on GPS/GNSS 2007 (ISG/GNSS 2007), Johor Bahru, Malaysia, 5 – 7 November 2007

Member of Editorial Board

GPS SOLUTIONS, an international journal published by Springer-Verlag, Berlin, Germany

Guest Editor (2003)

Together with Prof. G. Lachapelle, editing the special issue on *Wireless GPS* for the international journal *GPS Solutions* (2003, Vol. 6, No. 3.)

Column Editor (2002-2005)

GPS on the Web, *GPS Solutions*, an international journal.

Editor of The Pseudolite Special Issue (2007)

Journal of Global Positioning Systems

http://www.gmat.unsw.edu.au/wang/jgps/v6n2/index_v6n2.htm

Reviewer

Journals: *Journal of Geodesy / GPS Solutions / Earth, Planets and Space / Geomatics Research Australasian/ Survey Review/ Transportation Research/ IEEE Transactions on Aerospace and Electronic Systems/IEEE Transactions on Industrial Electronics*

Book: “*GPS Satellite Surveying*” (3rd edition) publication proposal for the international publisher John Wiley & Sons, Inc., New York, USA

Research Grant Applications:

Reviewer of research grant applications for the Australian Research Council; National Sciences and Engineering Research Council of Canadian.

Chairman of International Study Group

Chairman, International Association of Geodesy Commission 4 Study Group 4.1 (2003-2007)
 “Pseudolite applications in positioning and navigation”
<http://www.gmat.unsw.edu.au/pseudolite>.

President (2004)

International Association of Chinese Professionals in Global Positioning Systems.

International Study Group Activities

- 1999-2003 Member, International Association of Geodesy Special Study Group (1.179) “Wide area modelling for precise satellite positioning.”
- 1999-2003 Member, International Association of Geodesy Special Study Group (4.190) “Non-probabilistic assessment in geodetic data analysis.”
- 1997-1999 Corresponding Member, International Association of Geodesy Special Study Group (1.154) “Quality control issues in real-time GPS positioning.”

Selected Awards, Prizes, Scholarships and Certificates

- 2007 Elected to **Fellowship of the (UK) Royal Institute of Navigation (FRIN)**, on 16 May 2007, in recognition of my contributions to integration of satellite-based navigation systems.
- 2007 Elected to **Fellowship of the International Association of Geodesy (IAG)** on 12 July 2007, in recognition of esteemed services, as founding Chairman of the International Study Group 4.1 (2003-2007) on "Pseudolite Applications in Positioning and Navigation".
- 2003 **Distinguished International Fellowship**, Faculty of Engineering, University of Calgary, Canada.
- 1999 **ARC Postdoctoral Research Fellowship** (3 years), Australian Research Council (ARC), Australia
- 1998 **Winner of the Satellite Division Student Paper Competition** awarded at the International Technical Meeting of U.S. Institute of Navigation, Nashville, USA.
- 1996 **Australian Overseas Postgraduate Research Scholarship** (for 4 years).
Curtin University Postgraduate Research Scholarship (for 3.5 years).
Curtin University of Technology, Australia.
- 1995 **HKPU Research Student Scholarship** (for 3 years)
H. K. Polytechnic University, Hong Kong.
- 1993 **Best Paper Award**
Chinese Society of Surveying & Mapping, P.R. China.
- 1993 **Certificate for publication of software package APS-V, ISBN 7-5030-0685-4/P.242**,
China Publishing House of Surveying & Mapping, Beijing, P.R. China.
- 1992 **Certificate for publication of software package APS-H, ISBN 7-5030-0547-5/P.210**,
China Publishing House of Surveying & Mapping, Beijing, P.R. China.
- 1989 **Award for Excellent Postgraduate Research Achievement**
Wuhan Technical University of Surveying & Mapping, P.R. China.
- 1983 **Best Student Award**
Wuhan Technical University of Surveying & Mapping, P.R. China.
- 1978 **Maths Competition Award** Department of Education, Yuzhou, Henan, P.R. China.

Professional Affiliations

- International Association of Geodesy
- Spatial Sciences Institute, Australia
- International Association of Chinese Professionals in Global Positioning Systems (CPGPS)
- The Institute of Electrical and Electronic Engineering (IEEE), USA.
- The Institute of Navigation, USA.
- The Royal Institute of Navigation, UK.