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### **EDUCATION**

University of New South Wales, Sydney, Australia, 2002, Ph.D., Geomatic Engineering.  
University of New South Wales, Sydney, Australia, 1999, M.E.<sup>1</sup>, Geomatic Engineering.  
University of Nairobi, Nairobi, Kenya, 1997, B.Sc., Surveying Engineering.

### **POSITIONS HELD**

Assistant Professor, College of Engineering, California State University, Fresno, 2007- present.  
Faculty Assistant, California Department of Transportation (Caltrans), June 2011 – August 2011.  
Research Scientist, Geoscience Australia, Canberra, Australia, 2003-2007.  
Research/Teaching Assistant, University of New South Wales (UNSW), Australia 1999-2002.  
Assistant Surveyor, Aerophoto Systems Engineering, 1997-1999.

### **PUBLICATIONS AND PRESENTED PAPERS**

#### **(Books and Monographs)**

Ogaja, C., “Applied GPS for Engineers and Project Managers”, ISBN: 978-0-7844-1150-6, American Society of Civil Engineers / ASCE Press, (2011).

Ogaja, C., “Geomatics Engineering: A Practical Guide to Project Design”, ISBN: 978-1-4398-1743-8, Taylor and Francis Group / CRC Press, (2010).

Ogaja, C., Wang, J., C. Rizos, “Principal Component Analysis of wavelet transformed GPS data for deformation monitoring” In: Vistas for Geodesy in the New Millennium, J. Adams & K.P. Schwarz (eds.), IAG Symp. Vol.125, Springer, ISBN 3-540-43454-2, 341-346, 2002.

#### **(Peer-Reviewed Journals)**

Dammalage T.L., Satirapod C., Kibe S. & C. Ogaja. “C/A code multipath mitigation at GPS base stations for improved DGPS corrections using wavelets,” Survey Review, 42, 317, 240-255, July, 2010.

Zhao S-H., X-S. Lu, Q-F. Wang, G-R. Hu & C. Ogaja. “Analysis and evaluation of various tropospheric modelling approaches for high-precision GPS kinematic positioning over medium ranges and at high altitude: A case study,” Journal of Surveying Engineering, Vol. 135, No.2, May 1, 2009.

Ogaja, C., Li, X., Rizos, C. “Advances in structural monitoring with Global Positioning System Technology: 1997-2006,” Journal of Applied Geodesy, 1(3), 171-179, 2007.

Ogaja, C., & C. Satirapod, “Analysis of high-frequency multipath in 1-Hz GPS kinematic solutions,” GPS Solutions-Springer Verlag, Volume 11, Number 4, 269-280, DOI 10.1007/s10291-007-0058-8, 2007.

Ogaja, C., & J. Hedfors, “TEQC multipath metrics in MATLAB,” GPS Solutions, Volume 11, Number 3, 215-222, DOI 10.1007/s10291-006-0052-6, 2007.

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<sup>1</sup> upgraded to a PhD study

Ogaja, C., "Neural network relation of GPS results with continental hydrology," *Artificial Satellites - Journal of Planetary Geodesy* (ISSN 0208-841X), Vol. 41, No. 1, p. 23 - 32, 2006.

Ogaja, C., "Site-specific correlation of GPS height residuals with soil moisture variability using artificial neural networks," *Earth Planets Space*, 58,(2), p. e5-e8, 2006.

Ogaja, C., "Multisource data analysis for geoscience applications," *Computers & Geosciences*, Vol. 30, No. 5, 493-499, doi:10.1016/j.cageo.2004.02.002, 2004.

Ogaja, C., Wang, J. & C. Rizos, "Detection of wind-induced response by wavelet transformed GPS solutions," *Journal of Surveying Engineering*, Vol. 129, No. 3, 99-104, 2003.

Ogaja, C., Wang, J., Rizos, C. & J. Brownjohn, "Multivariate monitoring with GPS observations and auxiliary multisensor data," *GPS Solutions*, 5(4), 58-69, 2002.

Satirapod, C., Ogaja, C., & C. Rizos, "An approach to GPS analysis incorporating wavelet decomposition," *Artificial Satellites - Journal of Planetary Geodesy*, Vol. 36, No. 2, ISSN 0208-841X, 27-35, 2001.

### **(Conference Papers)**

Ogaja, C., "Crustal Dynamics in California: Implications for Large-Scale CSP Tower Systems," *ASES National Solar Conference (Solar 2010)*, Phoenix, May 17-22, 2010.

Ogaja, C., "Software implementation of multisensor data reduction and integrity assessment of GPS data for structural monitoring applications," *In Proc. 2nd Symp. on Geodesy for Geotechnical & Structural Engineering*, 21-24 May, Berlin, Germany, 27-37, 2002.

Ogaja, C., "On-line GPS integrity monitoring and deformation analysis for structural monitoring applications," *In Proc. 14th Int. Tech. Meeting of the Satellite Division of the U.S. Inst. of Navigation*, 11-14 September, Salt Lake City, Utah, USA, 989-999, 2001.

Ogaja, C., Rizos, C., Wang, J., & J. Brownjohn, "High precision dynamic GPS system for on-line structural monitoring," *5th Int. Symp. on Satellite Navigation Technology & Applications*, Canberra, Australia, 24-27 July, paper 35, CD-ROM proc., 2001.

Ogaja, C., Rizos, C., Wang, J., & J. Brownjohn, "A dynamic GPS system for on-line structural monitoring," *Int. Symp. on Kinematic Systems in Geodesy, Geomatics & Navigation*, 5-8 June, Banff, Canada, 290-297, 2001.

Ogaja, C., Rizos, C., Wang, J., & J. Brownjohn, "Towards the implementation of on-line structural monitoring using RTK-GPS and analysis of results using the wavelet transform," *10th FIG Int. Symp. on Deformation Measurements*, 19-22 March, Orange, California, USA. 284-293, 2001.

Ogaja, C., Rizos, C., & S. Han, "Is GPS good enough for monitoring the dynamics of high rise buildings?" *2nd Trans Tasman Survey Congress*, Queenstown, New Zealand, 20-26 August, 150-164, 2000.

### **(Unpublished Presentations)**

Ogaja, C., "Book Review (Applied GPS for Engineers and Project Managers)," *51st Annual Geomatics Engineering Conference*, Clovis, California, USA, 27-28 January, 2012.

Ogaja, C., "Book Review (Geomatics Engineering: A Practical Guide to Project Design)," *50th Annual Geomatics Engineering Conference*, Clovis, California, USA, 27-28 January, 2011.

Ogaja, C., "LSIT Review (GPS/Geodesy)," *48th Annual Geomatics Engineering Conference*, Clovis, California, USA, 22-24 January, 2009.

Ogaja, C., "Space Geodesy, Surveyor's Standpoint," *47th Annual Geomatics Engineering Conference*, Clovis, California, USA, 24-26 January, 2008.

Ogaja, C., "High-rate GPS/Geodesy: Implications for science and research," CSUF Seminar, California State University, Fresno, California, USA, 5 March, 2007.

Ogaja, C., "Trends in GPS technology and applications: A geomatics perspective," UCT Seminar, School of Architecture, Planning & Geomatics, University of Cape Town, South Africa, 13 February, 2007.

Ogaja, C., "Role of GPS in spatial sciences," USQ Seminar, Faculty of Engineering and Surveying, University of Southern Queensland, Australia, 15 February, 2006.

Ogaja, C., "Evaluation of hydrology signals with GPS measurements," 32nd Annual Research Seminars (ARS), School of Surveying & Spatial Information Systems (SIS), UNSW, Sydney, Australia, 7-8 November, 2005.

Ogaja, C., "A simplified fault detection algorithm and its application to integrity assessment of GPS data for real-time applications," 29th Annual Research Seminars, School of Surveying & SIS, UNSW, Sydney, Australia, 6-7 November, 2001.

Ogaja, C., "Wavelets extract high and low frequencies: A possible tool for GPS data analysis," 28th Annual Research Seminars, School of Surveying & SIS, UNSW, Sydney, Australia, 20-21 November, 2000.

### **TEACHING EXPERIENCE**

#### Surveying, GIS and Digital Mapping

- Engineering Math
- Computer Aided Mapping
- Least Squares Adjustment
- Engineering Surveying
- Project Design

#### GPS/GNSS and Geodesy

- GPS Theory and Application (Graduate Course)
- Satellite Geodesy
- Geopositioning
- Geodetic Surveying

#### Computer Programming

- MATLAB Programming
- UNIX and Windows
- C Programming
- Microcomputers in Engineering

### **SCHOLARLY & RESEARCH EXPERIENCE**

#### **(Research Proposals and Collaborations)**

Ogaja, C. (PI), R. Munjy (Co-PI), J. Larralde (Co-PI), and C. Won (Co-PI), "Applying GPS Data to Understand Travel Behavior", in response to RFP Number NCHRP 08-89 by The Transportation Research Board of The National Academies, November 2011. (\$250,000).

Co-PI with C. Choo, B. Hyatt, N. Bengiamin, I. Sorensen, and G. Kriehn, "Direct Assessment of Student Learning Outcomes via Quantitative Methods", Institutional Research, Assessment & Planning (IRAP) Grant, California State University Fresno, 2011-2012. (\$20,000).

Institutional Co-PI, "SAR Data for Western North America Crustal Dynamics Research: WINSAR Consortium", UNAVCO GeoEarthscope Mini Cat 1 Submission, 2008.

PI, "REU Site: GPS/GIS Laboratory Exercises for Undergraduate Research and Summer Internship", NSF (National Science Foundation), 2008. (\$314,935).

Co-PI with Linlin Ge (PI) and Xiaojing Li (Co-PI), “Automated Intelligent Building Monitoring with Multi-Sensor GPS, Accelerometer, and FBG Systems”, UNSW Faculty Research Grant, 2003-2004. (\$50,000).

PI, “Automated Intelligent Building Monitoring with Multi-Sensor-GPS Systems”, ARC-Discovery (Postdoc Fellowship) grant application, 2002. (\$830,482).

## **HONORS, AWARDS, AND RECOGNITIONS**

Henry Madden Outstanding Faculty Publication: 14th Annual Reception and Exhibition of Outstanding Faculty Publications, California State University Fresno, March, 2011.

Best Student Paper, ION-GPS Conference: 14th International Technical Meeting of the Satellite Division of the U.S. Institute of Navigation, September, 2001.

Best Session Presentation, ION-GPS Conference: 14th International Technical Meeting of the Satellite Division of the U.S. Institute of Navigation, September, 2001.

Best Student Paper, IAG Symposium: 2nd Symposium on Geodesy for Geotechnical & Structural Engineering, an IAG symposium, Berlin, Germany, 21-24 May, 2002.

The Institute of Surveyors of Kenya (ISK) Prize and The Survey Consult Prize for the best student in the Faculty of Engineering, University of Nairobi, 1999.

## **PROFESSIONAL SOCIETIES**

Member of Editorial Board of Journal of Surveying Engineering of the American Society of Civil Engineers (ASCE).

Affiliate Member of American Society of Civil Engineers (ASCE).

Member of American Association of Geodetic Surveying (AAGS).

Member of International Global Navigation Satellite Systems (IGNSS) Society.

Associate Member of the US Institute of Navigation (ION).

Member of IAG Study Group (SG 4.1) on New Technologies for Disaster Monitoring, 2011-

Member of Conference Planning Committee, Pacific Southwest Regional ASEE Conference: Transforming Engineering Education through Community Engagement, Entrepreneurship and Service Learning, Fresno, California, March 31-April 2, 2011.

Member, Conference Organizing Committee, IAG/IAPSO/IABO Joint Assembly, Dynamic Planet Conference in Cairns, Australia, August 22-26, 2005.

## **OTHER PROFESSIONAL DUTIES**

### **(Journal Reviews)**

Journal of Surveying Engineering

Journal of Transportation Engineering

Journal of Geodesy (Springer)

Journal of Geodetic Science

Sensors—Open Access Journal

Measurement—an Elsevier Journal

Smart Structures and Systems

Computers and Geosciences

Journal of Computational and Applied Mathematics

Artificial Satellites - Planetary Geodesy

Journal of Geophysical Research-Solid Earth

Terrestrial, Atmospheric and Oceanic Sciences

**(Grant Reviews)**

Invited External Grant Reviewer for the NSERC Grants Program, Canada.

**(Conference/Symposia Reviews)**

Pacific Southwest Regional ASEE Conference

International Association of Geodesy (IAG) Symposia

**UNIVERSITY SERVICE AND COMMITTEES**

**(California State University, Fresno)**

ABET Assessment Coordinator for Geomatics Engineering Program, Lyles College of Engineering, California State University, Fresno, 2010-present.

Geomatics Faculty Search Committee, Lyles College of Engineering, California State University, Fresno, Spring 2012.

Faculty Advisor for the American Congress on Surveying and Mapping Student Chapter.

Member, Masters Thesis Committee of the MSCE program in the Department of Civil and Geomatics Engineering, CSU Fresno, Spring 2008, Spring 2009, Fall 2011.

Faculty Member, Geomatics Engineering Program Advisory Council, CSU Fresno.

Faculty Advisor at the Annual Dog Days for Student Orientation.

Member, Academic Affairs Committee, Lyles College of Engineering, CSU Fresno, 2010-Secretary, Lyles College of Engineering Consultative Body, CSU Fresno, 2009-2011.

Member, Committee for Faculty Equity and Diversity, CSU Fresno, 2009-2011.

Member, Writing Competency Subcommittee, CSU Fresno, 2009-2010.

Member, Adhoc Key/Security Committee, College of Engineering, CSU Fresno, 2009-2010.

Member, Engineering Math Education Committee, Engineering, CSU Fresno, 2009.

**THESES AND PROJECT SUPERVISION**

Theses and Dissertation Students

- David Biswanger (Thesis Committee Member, Spring 2012).
- Kulwinder Sharma (Thesis Committee Member, Fall 2011).
- Paul Fridley (Thesis Committee Member, Fall 2011).
- Orrin Thomas (Thesis Committee Member, Spring 2009).
- Chia-Chia Wang (Thesis Committee Member, Spring 2008).

Project Advising and Non-Thesis Supervision

- Jacob C. Andresen, Senior Project (Supervision), Fall 2011.
- Christopher Vang, Senior Project (Supervision), Fall 2011.
- Timothy Fish, Independent Study (Supervision), Fall 2011.
- Lenard C. Roque, Senior Project (Supervision), Fall 2011.
- Daniel A. Cerda, Senior Project (Supervision), Spring 2010.
- Joaquin Javier Depaz, Senior Project (Supervision), Spring 2009.
- Christopher Scott Martin, Senior Project (Supervision), Spring 2009.
- Freddy C. Caiza B., Independent Study (Supervision), Spring 2008.