

ADRIANA C. GONZALEZ G.

EDUCATION

PHD IN ENGINEERING SCIENCES • OCT 2010 TO MAY 2016 (EXPECTED)

Université catholique de Louvain (UCL) – Ecole Polytechnique de Louvain (EPL) - Louvain-la-Neuve, Belgium

Thesis: Solving inverse problems by promoting sparsity

B.S. IN ELECTRICAL ENGINEERING • SEPT 2004 TO FEB 2010 • GPA: 3.83/4 Summa Cum Laude

Universidad Simón Bolívar – Caracas, Venezuela

Thesis: Multimodal analysis of motion captured by accelerometers and low-cost IR cameras for the assessment of the treatment of cerebrovascular incidents

EXCHANGE STUDENT • SEPT 2008 TO JUNE 2009

Université catholique de Louvain (UCL) – Ecole Polytechnique de Louvain (EPL) - Louvain-la-Neuve, Belgium

PROFESSIONAL EXPERIENCE

UNIVERSITE CATHOLIQUE DE LOUVAIN (UCL) – INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGIES, ELECTRONICS AND APPLIED MATHEMATICS (ICTEAM) – DEPARTMENT OF ELECTRICAL ENGINEERING (ELEN) • LOUVAIN-LA-NEUVE, BELGIUM • Oct 2010 to Present

TEACHING AND RESEARCH ASSISTANT

Research Experience

- Carried out independent research in image processing, exploiting data structure in order to solve inverse problems present in different optical applications
- Designed and implemented algorithms for image acquisition and processing using MATLAB
- Achieved high quality images from few amount of deflectometric measurements using the Compressed Sensing theory
- Acquired experience in non-convex optimization by estimating the response of telescopes using blind deconvolution
- Collaborated with local and international researchers
- Wrote international journal and conference papers
- Presented scientific work in international conferences, workshops and group meetings
- Attended doctoral courses in optimization and compressed sensing
- Contributed in the organization of the workshop iTWIST'14 in Namur, Belgium, as a member of the Local Organizing Committee
- Reviewed papers in IEEE Transactions on Image Processing and in the Journal of the Optical Society of America A (JOSA A)

Teaching Experience

- Participated in teaching activities for the following courses in the bachelor of engineering program:
 - Telecommunications (analog and digital telecommunications fundamentals and practical implementation using NI-LabVIEW and NI-USRP)
 - Applied Mathematics: Signals and Systems (signal processing fundamentals and practical implementation using MATLAB)
 - Physics (waves, electromagnetism and quantum physics)
 - Project for first year engineering students: design, modeling and prototype-based validation of a robot
- Evaluated students by means of oral presentations and practical activities

- Managed groups of up to 100 students
- Created and implemented new theoretical and practical exercises
- Coached first year engineering students in their learning process and in the development of team-work abilities
- Participated in discussions and meetings about the Master in Electrical Engineering Program, as a member of the Electrical Engineering (ELEC) Program Commission

ALCATEL-LUCENT – BELL-LABS – DEPARTMENT OF IMAGE AND VIDEO PROCESSING • MURRAY HILL, NJ, USA • June 2015 to August 2015

SUMMER INTERN

- Conducted independent research in multi-view imaging for the lensless camera
- Gained knowledge in understanding the architecture and principle of the lensless camera
- Designed and implemented image processing algorithms in MATLAB
- Helped in the understanding of the improvement capabilities of the multi-view imaging applied to the lensless camera
- Participated in several group meetings and seminars.
- Collaborated with the local team

ENIAC, C.A. – DEPARTMENT OF INFORMATION SECURITY • CARACAS, VENEZUELA • Feb 2010 to Sept 2010

SPECIALIST IN IT SOLUTIONS AND INFORMATION SECURITY

- Deployed the PGP Desktop Encryption throughout the work stations of the employers handling confidential information (20 work stations)
- Participated in the design of the company internal network to include the PGP Email Encryption platform
- Developed a visual basic application to encrypt data using PGP Command Line
- Implemented, installed and provided technical support of the PGP Command Line solution to clients
- Trained employers about Information Protection and PGP Encryption solutions (10 employers)

PUBLICATIONS

JOURNALS

- 2016 **A. González**, V. Delouille and L. Jacques. "Non-parametric PSF estimation from celestial transit solar images using blind deconvolution." *J. Space Weather Space Clim.*, 6, A1, 2016
- 2014 **A. González**, L. Jacques, C. De Vleeschouwer and P. Antoine, "Compressive Optical Deflectometric Tomography: A Constrained Total-Variation Approach", *Inverse Prob. Imaging Journal*, 8 (2), 2014

CONFERENCES

- 2014 **A. González** and L. Jacques, "Robust Phase Unwrapping by Convex Optimization", ICIP2014, October 27-30, 2014, Paris, France
- 2013 P. Sudhakar, L. Jacques, **A. González**, X. Dubois, P. Antoine and L. Joannes, "Compressive acquisition of sparse deflectometric maps", SampTA 2013, July 1-5, 2013, Bremen, Germany
- 2012 **A. González**, L. Jacques and P. Antoine, "TV-l2 refractive index map reconstruction from polar domain deflectometry", iTWIST'12, May 9-11, 2012, Marseille, France

P. Antoine, E. Fomouo, J.-L. Dewandel, D. Beghuin, **A. González** and L. Jacques, "Optical deflection tomography with reconstruction based on sparsity", OPTIMESS 2012, April 4-5, 2012, Antwerp, Belgium

J. Stamatakis, **A. González**, B. Caby, S. Lefebvre, Y. Vandermeeren and B. Macq, "Kinematic features of reach and grasp movements in stroke rehabilitation using accelerometers", BIOSIGNALS 2012, February 1-4, 2012, Vilamoura, Algarve, Portugal

2011 **A. González**, L. Jacques, E. Fomouo and P. Antoine, "Refractive index map reconstruction in optical deflectometry using total-variation regularization", SPIE11, August 21-25, 2011, San Diego, CA, USA

A. González, L. Jacques, E. Fomouo and P. Antoine, "Primal-dual reconstruction in refractive deflectometry", SPARS'11, Edinburgh, Scotland, June 27-30, 2011