

Ivan Lopez Hurtado, Ph.D.

Education

Ph.D. Electrical & Computer Engineering. December 2008

University of New Mexico, Albuquerque, NM, USA.

GPA: 4.2/4.33

M.S. Automation (Control Engineering). June 1998

Tec de Monterrey, Campus Monterrey, Mexico.

GPA: 96/100

B.S. Industrial Physics Engineering, December 1995

Tec de Monterrey, Campus Monterrey, Mexico.

GPA: 98/100

Professional Experience

01/2017 – Current

Provost and Vice President for Academic Affairs, Northern New Mexico College, Espanola, NM.

- Supervision the systematic and routine assessment of all academic and student services to measures and plan continuous improvement.
- Annual review of programs to ensure that academic programs that directly support the needs of the community are initiated and maintained.
- Prepares the annual budget for the division of Academic and Student Services, in line with the college's strategic priorities.
- Ensures that the activities of Academic and Student Affairs meet the requirements of the College's accrediting and licensing agencies.
- Supports enrollment management initiatives and innovations in programs and methods of delivery that respond in a timely manner to a rapidly changing environment.

07/2016 – 01/2017

Interim Provost and Vice President for Academic Affairs, Northern New Mexico College, Espanola, NM.

- Same as above

09/2014 – 12/2016

Dean and Associate Professor, College of Engineering and Technology, Northern New Mexico College, Espanola, NM.

- Supervision of two bachelor programs, one post-baccalaureate certificate, and ten associate degrees.
- College's budget supervision and funding assurance.

- Development and implementation of a new bachelor program in Electro-Mechanical Engineering Technology.
- Development, acquisition, and management of federal and private grants including NSF S-STEM, and Carl Perkins funding.
- Development of articulation agreements with SIPI and SFCC.

08/2008 – 08/2014

Chairperson and Associate Professor, Department of Engineering, Northern New Mexico College, Espanola, NM.

- Supervision, quality assurance, and assessment of full-time and adjunct faculty, student assistants, departmental and course curricula, and laboratories.
- Departmental budget supervision and funding assurance.
- Development, acquisition, and management of federal and private grants including NSF S-STEM, NSF Noyce, NSF STEP, PPOHA, CCRAA, and PNM.
- Student learning assessment, ABET accreditation and curriculum development supervision.
- Exemplary ABET visit (not one single deficiency, weakness, concern and/ or negative observation was found).
- Student advisement and retention coordination for the department.
- Supervision of one post baccalaureate certificate program, two Bachelor's degree programs and three Associate's degree programs.
- Developer of accelerator programs for engineering unprepared students.
- Instructor for several introductory and advanced courses.
- Service on Faculty Senate, Chairperson of College Budget Committee, service on several other college and departmental committees.

08/2004 – 07/2008

Graduate Assistant, Electrical & Computer Engineering Department, University of New Mexico, Albuquerque, NM.

- Consultant for NASA-Space Alliance Technology Outreach Program (SATOP) Projects: A) Rechargeable battery circuit design (LaserLure), B) microcontroller and sensor selection for dryer (Hydromatic Technologies Corporation), C) Eddie current inspection on a tank (Entergy), D) specifications design for a voice recognition system in a toy, etc.
- Instructor and teaching assistant for several courses.
- Research experience in networked control systems and tele-operation.

09/2006 – 12/2006

Internship, K&A Wireless, Albuquerque, NM.

- Design/implementation of a prototype of a heart rate sensing system on a mobile phone with Bluetooth and a Labview PC interface.

05/2002 - 08/2004

Director, Mechatronics Engineering Bachelor Program, Tec de Monterrey, Campus Juarez, Cd. Juarez, Mexico.

- Quality assurance of faculty, adjunct professor, labs, curriculum, etc.

- Planning and directing faculty and student activities (up to 200 students).
- Promotion and recruiting activities of the mechatronics undergraduate program.
- Problem-Based Learning certified instructor.

03/2001 - 05/2002

Project Engineer, VI Technology, Cd. Juarez, Mexico.

- Systems Integration based on Labview/CVI and National Instruments hardware.
- Testing System Design (NI hardware/ Labview Software):
 - Telescopic Actuator (Valeo), including force/current/speed measurements.
 - Testing System for PTCR with Internet product tracking (General Electric).
 - PTV PCBs (ACS and HOP) including I²C communication (Philips).
 - Current Monitoring System for air conditioner controllers (Valeo).

05/2000 - 02/2001

Automation Independent Consultant, JOT Automation, Monterrey, Mexico.

- Field service engineering and technical support on JOT automated board-handling Equipment in USA, Mexico and the Dominican Republic.
- Customer training for the following customers: Nokia, Flextronics, Ademco, Elcoteq, SCI, Celestica, Power One, National Instruments, VOGT, Lexmark and SMTC.

06/1998 – 10/1999

Field Processing Engineer, Schlumberger (Geco-Prakla), Houston, Texas.

- International experience working in the USA, England, Brazil and offshore in the Gulf of Mexico for one of the world's largest oilfield services provider.
- Data processing and quality control of seismic engineering projects.

01/1996 – 05/1998

Teaching Assistant, Tec de Monterrey, Campus Monterrey, Monterrey, Mexico.

- Physics Teaching Assistant

Grants and Donations

Grants Awarded

- Carl Perkins Grant Director (\$118K PED Grant). June 2015-June 2016.
- PEARL Principal Investigator (\$622K USD NSF S-STEM Grant). September 2013-Present.
- AVANCE Co-Director (PPOHA-Title V \$2.5 Million USD Grant for Post Baccalaureate Programs). October 2010 – Present.
- PNM-Smart Grid Project Principal Investigator (\$327K USD). April 2010-Present.
- CCRAA Director (\$2.39 Million USD Grant for STEM Infrastructure Improvement at NNMC). August 2009- September 2011.
- ASPIRE Co-Principal Investigator (\$500K USD NSF STEP Grant). June 2009 – May 2014.

Donations Received

- CNC Milling Machine donation from LANL. Fair Market Value: \$60K. June 2015.
- Conoco Philips donation (First Year Experience). \$6K. April 2015.
- Conoco Philips donation. \$25K. June 2012.

Teaching Experience

- Electrical Systems I (Hybrid), NNMC, Spring 2015.
- Electrical Systems I (Hybrid), NNMC, Fall 2015.
- Computer Logic Design, NNMC, Spring 2015.
- Circuit Analysis, NNMC, Fall 2014
- Circuit Analysis, NNMC, Spring 2014
- Introductory Math for Engineering Applications, NNMC, Spring 2014
- Introductory Math for Engineering Applications, NNMC, Fall 2013
- Computer Logic Design, NNMC, Spring 2013
- Introduction to Engineering, NNMC, Fall 2012
- Introductory Math for Engineering Applications, NNMC, Fall 2012
- Introduction to Engineering, NNMC, Spring 2012
- Computer Networks (two sections), NNMC, Fall 2011
- Introduction to Engineering Technology, NNMC, Spring 2011
- Circuit Analysis I, NNMC, Fall 2010
- Digital Control Systems, *Tecnologico de Monterrey* (visiting), Fall 2010
- Control Engineering, *Tecnologico de Monterrey* (visiting), Spring 2010
- Engineering Physics I, NNMC, Spring 2010
- Engineering Physics II, NNMC, Spring 2010
- Circuit Analysis I, NNMC, Fall 2009
- Computer Literacy, NNMC, Spring 2009
- Computer Logic Design, NNMC, Fall 2008
- Control Systems, UNM, Spring 2008
- Computer Logic Design Lab, UNM, Fall 2007
- Computer Logic Design Lab, UNM, Fall 2004
- Statics, *Tecnologico de Monterrey*, Spring 2004
- Logic Systems, *Tecnologico de Monterrey*, Spring 2003
- Dynamics, Tec de Monterrey, Fall 2002
- Engineering Math II, *Tecnologico de Monterrey*, Spring 2002
- Engineering Math I, *Tecnologico de Monterrey*, Fall 2001
- Physics Lab I, *Tecnologico de Monterrey*, Spring 1998
- Physics II, *Tecnologico de Monterrey*, Fall 1997
- Physics Lab I and III, *Tecnologico de Monterrey*, Spring 1997
- Physics Lab I and II, *Tecnologico de Monterrey*, Fall 1996
- Physics Lab I and II, *Tecnologico de Monterrey*, Spring 1996

Professional Development: Training and Courses

- Risk Management, ESI International. February 2016.
- SIMATIC S7 with TIA Portal (PLC) Siemens, Atlanta, GA. September 2015.
- NAPE Workshop, Advisement Training: Micro-messaging. July 2015.
- NMACTE Conference Ruidoso, NM. June 2015.
- Blackboard Faculty Training Institute Certificate. May 2015.
- ASEE Annual Conference 2014, Indianapolis, IN. June 2014.
- Program Evaluator Training by ABET, Baltimore, MD. April 2014.
- Interpersonal and Mentoring Competency Workshop. Dale Carnegie Training, January 2014.
- Higher Learning Commission Annual Conference. Chicago, IL. March 2015, April 2014, April 2013.
- Introduction to SQL, ED2GO, Summer 2013.
- ASEE Annual Conference 2014, Atlanta, GA. June 2013.
- Introduction to Computational Finance and Econometrics, Coursera. Spring 2013.
- Game Theory, Coursera, Spring 2013.
- Quality Matters Annual Conference, Tucson, AZ. October 2012.
- Introduction to Finance, Coursera. Fall 2012.
- ASEE Annual Conference 2012, San Antonio, TX. June 2012.
- Managing Projects, ESI International. May 2012.
- Diversity and Equity in the Classroom and Beyond. Espanola, NM/ January 2012.
- CISCO Networking Fundamentals Course. June 2011.
- ASEE Annual Conference 2011, Vancouver, CA. June 2011.
- NSF Annual STEP Meeting, Arlington, VA. March 2014, March 2013, March 2012, March 2011, March 2010 and March 2009.
- Title III and Title V Annual Directors Meeting, Washington, DC. March 2013, April 2011 and March 2010.
- Train the Trainer: Non-Traditional Career Workshop. February 2011.
- Sexual Harassment in the Workplace Workshop, NNMC, January 2011.
- Ford Partnership for Advanced Studies: Working Toward Sustainability Workshop, Santa Fe, NM, April 2010.
- QEM HSI-STEM Follow-up Workshop, Las Vegas, December 2009.
- QEM HSI-STEM Follow-up Workshop, Albuquerque, September 2009.
- ABET Best Assessment Practices Symposium, Indianapolis, IN. April 2009.
- Faculty Workshop: Integrated Electric Energy Systems Curriculum, Flagstaff, AZ. July 2008.
- American Control Conference, New York City, NY. July 2007.
- Problem-based Learning Implementation, Cd. Juarez, Mexico, 2004.
- Interactive Workshop in Learning Space, Cd. Juarez, Mexico, 2002.
- Collaborative Learning Course, Cd. Juarez, Mexico, 2002.
- Introduction to Blackboard Software, Cd. Juarez, Mexico, 2002.
- Adult Education Course, Cd. Juarez, Mexico, 2001.
- Redesign of the Teaching Skills, Cd. Juarez, Mexico, 2001.

- Workshop in Teaching Skills, Cd. Juarez, Mexico, 2001.
- Basic Omron PLC Series C Course, Monterrey, Mexico. July 2000.
- JOT/Agilent Test Handler Training, Loveland, Colorado. June 2000.
- Basic Safety and Emergency Preparedness Training, England. September 1998.
- Seismic Technologies and Related Training, England. September 1998.
- Oil Field Services, Houston, TX, United States. June 1998.

Awards and Acknowledgments

- Service Award by the NNMC Student Senate. May 2015.
- Faculty Fellowship Summer Institute in Israel, Jewish National Fund. May 2015.
- Nomination for “Faculty of the Year” Award. August 2011.
- “Favorite Instructor” Award for the STEM Summer Camp. July 2009.
- Research Professorship Appointment at The University of New Mexico. December 2008-Present.
- Dean’s Dissertation Scholarship. August 2007
- University of New Mexico Regents Graduate Fellowship Award. August 2006-May 2007
- Outstanding ECE Graduate Student Award of the Year. May 2006
- *Secretaria de Educacion Publica* Scholarship Recipient. Oct 2004 – Sept 2007
- *Conacyt* Scholarship Recipient (*Conacyt* is the Mexican Science Agency). September 2004-July 2008
- Honoric Mention for Excellence, M.S. Automation, Tec de Monterrey, Mexico. June 1996
- Nuevo Leon College Foundation Excellence Award. October 1996
- Honoric Mention for Excellence, B.S. Physics Engineering, Tec de Monterrey. December 1995
- *Tecnologico de Monterrey* Scholarship Recipient. August 1991 – December 1995

Professional Membership

- ABET Program Evaluator, April 2014.
- ASEE Professional Member, May 2011
- *Sigma Xi* Professional Member, March 2009.
- *Phi Kappa Phi* Professional Member, April 2008.
- IEEE Professional Member, January 2007.

College and Community Service

- ABET Program Evaluation. Visits: November 2014 and November 2015.

- Chair for the Academic Planning Taskforce. May 2013 – Current.
- Reviewer for the CTE Program of Studies Evaluation Rubric for PED. March 2015.
- Technical Reviewer for the National Science Foundation Panels. 2014.
- NSF STEP Annual Meeting 2014 Panelist: 1) Bridge Programs and 2) Increasing Student Success in Foundational Math Courses.
- Instructor for the Friday Academy (teaching STEM to middle-school students) since 2011.
- Co-Chair for the Provost Search Committee. July 2013 – February 2014.
- Chair for the Data Acquisition, Analysis and Reporting-Provost Advisory Committee. September 2011 – May 2012.
- Personnel Faculty Senate Committee, Chair August 2012-August 2013, and Co-Chair August 2011-May 2012.
- By-Laws and Constitution Ad-hoc Committee for the Faculty Senate, Chair. November 2010-May 2012.
- STEM Summer Camp Director (More than 150 high-school students served on Summer 2009, 2010 and 2011).
- Science Fair Judge, “Amy Biehl” Elementary School. May 2011.
- Budget management and Chair for the Budget Review Faculty Senate Committee. February 2009-November 2010
- Technical Reviewer for the National Science Foundation Panels. 2009.
- Guest Editor for the Special Issue “Control with Limited Information” in the International Journal of Robust and Nonlinear Control. September 2007-February 2009.
- Technical Reviewer for Journal of Mathematical Control and Information, IEEE Transactions on Automatic Control, American Control Conference, IEEE Conference on Decision and Control, IEEE American Control Conference, others.
- Co-organizer of an invited session in the American Control Conference. July 2007.
- Volunteer with ISTE: collaborative networks between USA and Latin America. June 2007 – October 2008.
- Vice-president and Secretary of the ECE Graduate Student Association. September 2005 –August 2007

News/Media

Consulting work published here:

- **Entrepreneur Creates Unique Clothes Dryer With Help From SATOP**
Reported in the online report of Tech Reach, 1st Quarter 2007:
<http://www.trda.org/enewsletters/printable.asp?edition=20071Q>
- **UNM'S ECE Department Goes the Distance for SATOP.**
Reported in SATOP: New Mexico tri-monthly publication, Vol:6, Issue:2, 2007, Apr-June.

Publications

Book Chapters:

- [1] R. Sandoval, C.T. Abdallah, H.N. Jerez, I. Lopez, O. Martinez and D. Lee., **Networked Control Systems: Algorithms and Experiments**, “Lecture Notes in Control and Information Sciences”, Springer Berlin/Heidelberg, 2007, 37-56.

Journals:

- [1] Lopez Hurtado, I., Abdallah, C., Jayaweera S., **Limitations in tracking systems**, **Journal Control Theory and Applications**, August 2010.
- [2] Lee, D., Xu D., Martinez, O., Spong, M. Lopez, I. and Abdallah C., **Haptic Tele-Driving of Wheeled Mobile Robot with Communication Delay**, Submitted to International Journal of Robotics Research, May 2009.
- [3] Lopez, I. and Abdallah, C., **Rate-Limited Stabilization: Sub-optimal Encoder-Decoder Schemes**, International Journal of Robust and Nonlinear Control. February 2009.

Editorials:

- [1] Lopez, I., Abdallah, C., and Canudas-de-Wit Canudas. **Control under Limited Information: Special Issue (Part I)**, International Journal of Robust and Nonlinear Control, December 2009.
- [2] Lopez, I., Abdallah, C., and Canudas-de-Wit Canudas. **Control under Limited Information: Special Issue (Part II)**, International Journal of Robust and Nonlinear Control, December 2009.

Conferences:

- [1] Crichigno, J., Lopez, I., Peralta, R and Perez, A. **From Conception to Accreditation: The Path of and Engineering Technology Program**. ASEE Conference 2015, June 2015.
- [2] Martinez, P., Torres, D., and Lopez, I. **The Good and Bad News of Remediation: Analyzing our Data**. Higher Learning Commission Annual Conference 2015, March 2015.
- [3] Lopez, I., Crichigno, J., and Perez, A. **A Successful Partnership between Industry and Academia: Improving Curriculum, Research, and Outreach by Collaboration with Industry**. ASEE Conference 2014, June 2014.
- [4] Perez, A., Crichigno, J., Perez, A. and Lopez, I. **Enhancing Computational Thinking Skills for New Mexico Schools**. ASEE Conference 2014, June 2014.
- [5] Crichigno, J., Lopez, I. Peralta, R., Perez, A. **A Learning-by-doing Program based on Traditional Engineering Foundations and Hands-on Implementation-Driven for New Mexico Schools**. ASEE Conference 2014, June 2014.
- [6] J. Marcio, G. Heileman, C. Abdallah, I. Lopez, J. Crichigno, A. Perez **Online Student Support Services for STEM Courses in “Anonymous State”: A Cross-Institutional Approach**. ASEE Conference 2014, June 2014.

- [7] Lopez, I., Knight, C., Peralta, R., and Crichigno, J. **A Highly Successful Summer Accelerator Math Program in a Hispanic Serving Institution.** ASEE Conference 2013.
- [8] Crichigno, J., Heileman, G., Lopez, I., Perez, A., and Jordan, R. **Cross-Institutional Collaboration on Hybrid Engineering Courses among Institutions in New Mexico.** ASEE Conference 2013.
- [9] Lopez, I. and Crichigno, J. **Improving Recruitment and Retention for Engineering Degree Students in a Rural Highly Underserved Community.** ASEE Conference 2012, June 2012.
- [10] Crichigno, J. and Lopez, I. **An Alternative Model for Computer Networks Education in Computing Disciplines.** ASEE Conference 2012, June 2012.
- [11] Lopez, I., Abdallah, C., Jayaweera, S. and Tanner H. **Conditions for Tracking in Networked Control Systems,** Conference on Decision and Control, December 2008, 3626-3632.
- [12] Lopez, I., and Abdallah, C., **Rate-Limited Stabilization for Network Control Systems,** American Control Conference, July 07, 275-280.
- [13] Lopez, I., Abdallah, C, and C. Canudas de Wit, **Gain-Scheduling Multi-Bit Delta-Modulator for Networked Controlled System,** European Control Conference, July 2007.
- [14] Lopez, I., and Abdallah, C., **Data Rates Conditions for Network Control System Stabilization,** IEEE Mediterranean Conference on Control and Automation, July 2007.
- [15] Martinez O., Lee D., Spong M., Lopez, I., and Abdallah, C., **Bilateral Teleoperation of Mobile Robot over Delayed Communication Network: Implementation,** IEEE /RSJ International Conference on Intelligent Robots and Systems, October 2006, 4193-4198.
- [16] Lopez, I., and Abdallah, C., **Recent Advances on Control Theory under Communications Constraints: A Survey,** IEEE Mediterranean Conference on Control and Automation, June 2006, 1-6.
- [17] Lopez, I., Piovesan, J., Abdallah, C., Lee D., Martinez O., Spong M., Rodriguez R., **Practical Issues in Networked Control Systems,** American Control Conference, June 2006, 4201-4206.
- [18] Lopez, I. and Valenzuela-Rendon, M., **Diseño de controladores PID digitales mediante programación genética,** Taller de Inteligencia Artificial, October 1998, 214-226.

Poster Presentations:

- [1] Sena A., Lopez I., Knight C.. **Advancing STEM Performance, Innovation, and Retention,** STEP Grantees Meeting 2014.
- [2] Sena A., Lopez I., Knight C., Peralta R. **Advancing STEM Performance, Innovation, and Retention,** STEP Grantees Meeting 2013.
- [3] Sena A., Lopez I., Crichigno J., Linnell B, Salas V., **Advancing STEM Performance, Innovation, and Retention,** STEP Grantees Meeting 2012.
- [4] Sena A., Lopez I., Crichigno J., Ricoy U. **Advancing STEM Performance, Innovation, and Retention,** NSF STEP Grantees Meeting 2011.

- [5] Sena A., Salazar A., Lopez I., Crichigno J. **Advancing STEM Performance, Innovation, and Retention**, NSF STEP Grantees Meeting 2010.
- [6] Sena A., Salazar A., Lopez I., Duran C., **Advancing STEM Performance, Innovation, and Retention**, STEP Grantees Meeting 2009.

Technical Skills

- Technical Software: Labview, Matlab, C, Multisim, Packet Tracer and VHDL.
- General Purpose Software: Microsoft Office Suite, Latex and Abode Professional.
- Operating Systems: OS, Windows, and Unix.
- Learning Management Systems: Blackboard and WebCT.
- Teaching Hardware: NI Elvis II, NI Data Acquisition Cards, Circuit analysis measurement devices, Xilinx FPGA Boards and NTX Robotics.

Languages

- Native proficiency in Spanish and proficiency in English.