Krystian X. Perez

3401 W. Parmer Ln. #434 Austin, TX 78727
801-592-9036
krystian.perez@utexas.edu

EDUCATION

PhD. Chemical Engineering **2012-current**

University of Texas at Austin
Advisor: Drs. Thomas Edgar and Michael Baldea
GPA 3.70/4.00

B.S. in Chemical Engineering **April 2012**

Brigham Young University
GPA: 3.80 / 4.00

Speak, read and write English, Spanish and Vietnamese

TECHNICAL EXPERIENCE

Graduate Research/Teaching Assistant: University of Texas Austin, TX *2012-current*

- Perform modeling and optimization of integrated energy systems (e.g., gas turbines, commercial buildings, thermal storage, solar PV, etc.) that are tied to the smart grid
- Developed model predictive control for a novel chiller system with thermal storage
- TA Courses: Unit Operations

Research Intern: Hazard Protection Systems *May 2012 –August 2012*

- Increased the efficiency of a dry chemical extinguishing agent by roughly 250% while keeping previous cost
- Prepared product specs and safety for commercialization in military applications

Team Leader: Global Engineering Outreach Club *May 2011-May 2012*

- Design low cost, compact slow sand filters for Uros Island people in Lake Titicaca, Peru
- Set timelines for project completion and keep team members on task

Materials Intern: Institute of Nanoscience and Nanotechnology, University of Iowa *May 2011-August 2011*

- Fabricated nano-scale patterns for use in improving cochlear implants through neural tissue engineering
- Reduced costs to create custom nano-patterns by $200 by designing a new technique
- Won first place in materials science poster session at AICHE National Conference

Senior Research Assistant: Dr. William Pitt, Contact Lens Research Group, BYU *Sept 2010-Sept 2012*

- Researched innovative drug delivery system through elution of phospholipids in contact lenses
- Integrated results of research into new commercial product produced by Ciba Vision

PEER-REVIEWED CONFERENCE & JOURNAL PAPERS

[1] Pitt, W.G., **Perez, K.X.**, Tam, N.K., Handly, E., Chinn, J., Liu, X.M., Maziarz, E.P., “Quantitation of Cholesterol and Phospholipid Sorption on Silicone Hydrogel Contact Lenses” J. Biomedical Materials Research B: Applied Biomaterials, **in print** June 2013.

[2] Bradley W. Tuft, Shufeng Li, Linjing Xu, Joseph C. Clarke, Scott P. White, Bradley A. Guymon, **Krystian X. Perez**, Marlan R. Hansen, C. Allan Guymon, “Photopolymerized microfeatures for directed spiral ganglion neurite and Schwann cell growth”, Biomaterials, **in print** 13 October 2012.

[3] Pitt, W.G, Zhao, Y., **Perez, K.X.**, Nelson, J.L., Pruitt, J.D., “Delivery of a Phospholipid Agent from a Silicone Hydrogel Contact Lens”, AIChE Annual Meeting,Minneapolis, MN October 16-20, 2011, paper 448d.

[4] Pitt, W.G., Zhao, Y., **Perez, K.X.**, Jack, D.R., Lee, J., Nelson, J.L., Pruitt, J.D., "Extended Release of DMPC from Silicone Hydrogel Contact Lenses" Annual Meeting & Exposition of the Controlled Release Society, 39, Quebec City, Canada, July 15-18, 2012. (podium presentation)

[5] Liu, X.M., Pitt, W.G., Chinn, J., **Perez, K.X.**, Tam, P., "Sorption Of Radiolabeled Lipids On Silicone Hydrogel Contact Lenses", American Academy of Optometry Annual Meeting, October 24-27, 2012, Phoenix, AZ, poster 76.

CONFERENCE ABSTRACTS & PRESENTATIONS

[1] Pitt, W.G., **Perez, K.X.**, Handly, E., E., Chinn, J., Liu, X.M., Maziarz, E.P., "Lipid Sorption of Contact Lenses Using Radiolabeling Techniques", SurFacts in Biomaterials, **in print** Summer 2012.

OUTREACH/LEADERSHIP

Cockrell School of Engineering WEP K-12 STEM Outreach Certificate *June 2013*

- Awarded for 20+ hours of engineering outreach at UT Austin

Chemical Engineering Graduate Liason: Society of Hispanic Professional Engineers *2012-Present*

Student Seminar Series Subcommittee Member: Graduate ChE Leadership Council *May 2013-Present*

Rufftail Runner: Austin's Pets Alive *January 2012-Present*

IGERT Affiliate: Sustainable Grid Integration of Distributed and Renewable Resource *2012-Present*

- Helped prepare and evaluate UTeachEngineering Solar Panel Teaching Module for use in new engineering course to introduce students to STEM.

HONORS/SKILLS

Member: Engineering Honors Society Tau Beta Pi *2011-Present*

Passed Fundamentals of Engineering Exam *April 2012*

Cockrell School of Engineering Thrust 2000 Fellowship *2012-2016*

Bill and Melinda Gates Millennium Fellowship *2006-Present*

National Science Foundation Graduate Research Fellowship Program (GRFP) Fellowship *2012-2016*

- "Residential Energy Modeling for the Reduction of Peak Energy"