Ian (I-An) Lai

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EDUCATION

Pennsylvania State University — University Park, PA   **Expected Graduation: July 2016**

    Degree: M.S. in Petroleum and Natural Gas Engineering
    Thesis: ANN models applicable to design water-flooding projects in the three phase reservoir
    Relevant Coursework: Numerical Solution of the Partial Differential Equations of Flow in Porous Media, Phase Relations in Reservoir engineering, Reservoir Characterization, Geostatistics
    Skill/Expertise: Fluid Mechanics, Simulation, Well Testing, Engineer Geology

National Cheng Kung University — Tainan, Taiwan   **Graduated June 2013**

    Major: B.S. in Resource Engineering

WORK EXPERIENCE

Penn State University, University Park, PA — *Teaching Assistant*   **October 2014 – December 2014**

- Collaborated with the teaching assistant team in carrying out coursework, grading, proctoring, and guiding the 250 students in *Rock and Fluid Property*

Army Logistics Command, Taipei, Taiwan — *Second Lieutenant, Chief Counselor*   **July 2013 – June 2014**

- Managed the 196 soldiers by facilitating their physical and physiological condition in the battalion
- Facilitated three battalions for two military exercises

Underground Water Resource Lab, Tainan, Taiwan — *Undergraduate Researcher*   **February 2012 – June 2012**

- Analyzed the data with water balance concept model, based-flow record estimation, Index Recharged Method, and Rock Quality Designation in the Sz-Chung-Shi, a river located at southern Taiwan
- Built an empirical model suggesting that the permissive yielding of the Sz-Chung-Shi hot spring area was at a value of 7.99×10^6 ft^3 / yr by controlling specified conditions, including underground safe yielding, geothermal resource, and fracture pattern

CPC Corporation: Exploration and Development Research Institute, Miao-Li, Taiwan — *Intern*   **October 2010**

- Applied Mercury Pump Porometers to measure the porosity of sampled rocks in order to predict the oil production rate at the Tsu-Huang-Kun oil field
- Used Brookfield Viscometers to measure the viscosity of mud and ensure a successful drilling

RELEVANT PROJECTS

Reservoir characterization of Laurentian Basin   **March 2015 – May 2015**

- Made qualitative interpretation of the geology at Laurentian Basin, Canada via OpendTech
- Interpreted 2D and 3D petrophysical property maps to find potential oil/gas reservoir

Development of a Single-phase Compressible Fluid Flow Model   **September 2014 – December 2014**

- Simulated a reservoir condition by applying Matlab to analyze data collected from a reservoir field
- Applied Systematic Iterative Methods to determine the amount of production and injection of gas under specified pressure limit of pipeline

Development of Phase Behavior Model of Reservoir Fluid   **September 2014 – December 2014**

- Built a simulator of reservoir fluid by compiling Matlab
- Created a reliable prediction of natural gas in the reservoir under different conditions based on thermodynamic properties, calculation and data

LEADERSHIP

Taiwanese Student Association, PSU, PA — *Public Relations*   **February 2015 – May 2016**

- Coordinated fundraising efforts increasing the Associate budget by 65%
- Organized various events throughout two semesters

The Mother Teresa of Calcutta Center, Calcutta, India —Volunteer   **July 2012 – August 2012**

- Arranged a volunteer team and took care of 14 patients

SKILLS

Languages: English (Proficient), Mandarin (Native), Taiwanese (Native), Japanese (Basic)
Technical: Matlab, CMG, OpendTech, C++, MS Office Suite, Autocad (Beginner)