

Da Huo
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Room 2210, Ziyuanxi Building, Peking University, Beijing, 100871, China

EDUCATION

College of Engineering, Peking University	Sep 2008 – Jul 2011
• M.S. in Energy & Resource Engineering, GPA: 3.74/4.00	
College of Engineering, Peking University	Sep 2004 – Jul 2008
• B.E. in Engineering Structural Analysis, GPA: 3.31/4.00	
China Center for Economic Research, Peking University	Sep 2004 – Jul 2008
• B.A. in Economics, GPA: 3.55/4.00	

RESEARCH EXPERIENCES

Research Assistant, Reservoir Simulation Laboratory, Peking University	Sep 2008 – Present
<i>Advisor: Prof. Bin Gong, Prof. Dongxiao Zhang</i>	

- Applied Discrete Fracture Modeling (DFM) to model CO₂ storage in Deep Saline Aquifers and possible leakage caused by fractures, wells and hydraulic fracturing
- Drafted Peking University's part of the report *Collaborative Research on Carbon Sequestration in Saline Aquifers in China* as part of Stanford University's Global Climate and Energy Project (GCEP)
- Presented a talk at Stanford University as the representative of Peking U. on *Numerical Simulation on CO₂ Storage and Leakage through Fractures and Wells*
- Implemented geologic modeling and simulation work with Shenhua Carbon Capture & Storage (CCS) Project (100,000 tons/year) – China's first large scale CCS project
- Summarized world CCS programs and drafted the report *World CCS Program Overview* in collaboration with China Geologic Survey Administration
- Performed geologic modeling and simulation on coalbed methane production in Hancheng Coalfield with the project *Optimization and Production Prediction of Coalbed Methane in East Erdos Basin*
- Conducted literature review work on coalbed methane, stripper wells, geothermal field and heavy oil production

Research Assistant, Oil and Geothermal Technology Laboratory, Peking University	Mar 2007 – Sep 2008
<i>Advisor: Prof. Kewen Li</i>	

- Researched oil production decline and compared several models in predicting oil production
- Built a new model on spontaneous water imbibition based on Li-Horne model and Brooks Corey model
- Drafted PetroChina project *Dynamic Oilfield Development Research*
- Authored the experimental part of the PetroChina project *Coalbed Methane Mechanism Study*
- Conducted SEM study of coal structure, pressure decline experiment, imbibition experiment, and mercury injection experiment on Qinshui coal and Black Warrior coal respectively
- Completed undergraduate thesis entitled *Theoretical and Experimental Investigation on Permeability and Relative Permeability of Coal Rock*

WORK EXPERIENCES

Reservoir Engineer, Schlumberger	Jun 2009 – Jun 2010
<i>Advisor: Dr. Younes Jalali</i>	

- Researched real time horizontal well Productivity Index (PI) estimation using Kriging method to update geologic horizons and Babu-Odeh model to calculate PI
- Performed simulation on methane hydrate Inflow Performance Relationship (IPR) following Vogel's approach and summarized same IPR for methane hydrate with Vogel model
- Conducted Carbon Capture and Storage feasibility analysis and economic assessment with four ongoing CCS projects and major sour gas fields around the world
- Participated Schlumberger training program on Petrel, Eclipse and borehole imaging technology
- Attended Schlumberger HSE training program and annual conference in China

Intern, Baker Hughes	Aug 2010
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- Received training on Baker Hughes' main products (BOT, HCC, Centrilift, etc.)
- Investigated Baker Hughes' INTEQ well logging tools (OnTrak, AziTrak, LithoTrak, etc.)
- Presented *Introduction to Carbon Capture & Storage* to Baker Hughes' employees

Teaching Assistant, course: Flow in Porous media	Feb 2009 – Jul 2009; Sep 2010 – Present
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- Arranged to give three lectures on *Flow in Porous Media*, which practiced the ability of teaching

Reservoir Engineer, Reservoir Laboratory, Daqing Oilfield, PetroChina	Jul 2008
• Researched oil production decline of 10 districts in Daqing Oilfield	

- Participated coal-bed methane study and anchor rod experiment
- Joined the horizontal well workshop held by Arrow Energy and Lu'an Mining Co. Ltd.

PROFESSIONAL & SOCIAL ACTIVITIES

President, Society of Petroleum Engineers (SPE) Student Chapter at Peking University Mar 2010 – Oct 2010

- Initiated SPE Student Chapter at Peking U. and acquired authorization from SPE Asia Pacific Office
- Set up relationships with several oil companies (Anadarko, SLB, etc.) and other SPE student chapters
- Invited guests from 7 oil companies to opening ceremony and organized 2 *PetroChampion* Lecture Series

Chairman, Center for Academic Exchange of Graduates, Peking University Sep 2008 – Jun 2009

- Arranged more than 10 *Yanyuan* Debate lectures covering politics, economics, culture, and resources

Secretary General, Student's Union, College of Engineering, Peking University Sep 2005 – Sep 2006

- Drafted 2005 *Memoirist* and the *Welcome Freshmen Handbook* (more than 70 pages)

Leader, Shanxi & Gansu Social Practice Team, Peking University Jul 2006; Jul 2007

- Organized more than 30 lectures in Shanxi & Gansu and offered classes in Qinzhou High School for 5 days
- Received the honor of Excellent Team 2 times

PUBLICATIONS

- Discrete Modeling and Simulation on Potential Leakage Through Fractures and Wells in CO₂ Sequestration, SPE 135507, presented at 2010 SPE Annual Technical Conference and Exhibition in Italy (1st Author)
- Numerical Simulation on CO₂ Leakage through Fractures along Wells Using Discrete Fracture Modeling, SPE 133986, presented at 2010 SPE Asia Pacific Oil and Gas Conference and Exhibition in Australia (1st Author)
- An Analysis of CO₂ Storage Prospects in Deep Saline Reservoirs, SPE 136077, presented at the 2010 SPE Production and Operations Conference and Exhibition in Tunisia (1st Author)
- Numerical Simulation on CO₂ Sequestration in Saline Formations with Natural or Hydraulic Fractures Using A Discrete Modeling Approach, SPE 137621, presented at the 2010 Canadian Unconventional Resources & International Petroleum Conference in Canada (3rd Author)
- Numerical Simulation on CO₂ Leakage through Fractures and Wells Using Discrete Fracture Modeling, presented at 2010 Global Climate and Energy Project Research Symposium in California (1st Author)
- CO₂ Storage Capacity & Leakage Risk Assessment: What Should We Do When It Comes to A Certain Reservoir, presented at 2010 Global Climate and Energy Project Research Symposium in California (3rd Author)
- On the Relationship Between Energy Prices and National Economy, China Soft Science, 2009 (386), 52-56 (1st Author)
- Decline Curve Analysis of Oil Production in Low Permeability Reservoirs with Great Heterogeneity, SPE115053, presented at the 2008 SPE Asia Pacific Oil and Gas Conference and Exhibition in Australia (1st Author)
- Effects of Natural or Hydraulic Fractures on CO₂ Sequestration in Saline Formations, to be submitted to Journal of Petroleum Science & Engineering (2nd Author)

AWARDS

- Academic Fellowship from 2008 to 2011
- Boeing Scholarship in 2009 (3/92)
- PKU Triple-A Student in 2008 (4/92)
- Second Place in the "Science Park" Business Plan Competition in 2007
- Third Prize in Peking University Mathematical Modeling Competition in 2006
- Changzhi Government Scholarship in 2004 (10/3000)
- 1st prize in China's National Olympic Physics Competition in 2003

PROFESSIONAL SKILLS

- Programming Languages: C/C++, Matlab
- Engineering Applications:
 - Reservoir Simulators: ECLIPSE, GPRS, CoalGas, TOUGH2
 - Geological Modeling and GeoStatistics: Gocad, Petrel, GSLIB
- Office Applications: Microsoft Office, Photoshop

STANDARDIZED TESTS

- GRE: Verbal 500 (63%) +Quantitative 800 (94%) +Analytical Writing 3.5
- TOEFL: Total 101 (Reading 27+Listening 24+Speaking 22+Writing 28)