XU XUE

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2250 Dartmouth Street, Apt. 526, College Station, Texas

OBJECTIVE

Seeking for an internship position for summer 2016 as a reservoir engineer in the oil and gas industry.

EDUCATION

Sep. 2014-May 2018   Texas A&M University, College Station, Texas

Ph.D. in Petroleum Engineering

Supervisor: Dr. Akhil Datta-Gupta   GPA: 4.00/4.00

Sep. 2011-Jun. 2014   University of Chinese Academy of Sciences, Beijing, China

Master of Science in Refrigeration and Cryogenic Engineering

Supervisor: Dr. Jing Liu and Dr. Zhi-Zhu He   GPA: 85.5/100, 3.58/4.00

Sep. 2007-Jun. 2011   University of Science and Technology Beijing, Beijing, China

Bachelor of Science in Thermal Energy and Dynamic Engineering

GPA: 87.4/100, 3.64/4.00   Major GPA: 90.6/100, 3.84/4.00   Rank: 5/105

RESEARCH EXPERIENCE

Nov. 2014-Present   MCERI, Texas A&M University, College Station, Texas   Graduate Research Assistant

Fast Marching Method Based Reservoir Characterization and Simulation

- Developed a stand-alone fast marching method based reservoir simulation software FRONTS3D using C++ and QT.
- Developed a novel approach for complex fracture systems characterization and refracturing candidate selection based on the production data of the wells in unconventional reservoirs.
- Numerically simulated the production of complex fracture systems in horizontal wells using software MANGROVE and INTERSECT to validate the approach.

Oct. 2012-Dec. 2013   Chinese Academy of Sciences, Beijing, China   Graduate Research Assistant

Numerical and Experimental Method of Phase Change Phenomenon (Two papers)

- Developed Matlab programs to calculate ice crystals growth in aqueous solution and nanofluid using the phase field method.
- Measured ice crystals growth using high speed camera and cryomicroscope.
- Proposed a new experimental method to detect the phase transition in aqueous solution and nanofluid based on Raman spectrum.

Jan. 2012-Sep. 2012   Chinese Academy of Sciences, Beijing, China   Graduate Research Assistant

Magnetic Resonance Imaging (MRI) Based Numerical Simulation (Three papers)

- Reconstructed human body structures based on high resolution MRI data (3.0T MRI system) using software Mimics and Solidworks.
- Numerically simulated the temperature field in the knee joint and the velocity field in large blood vessels during therapy process using finite element method.
- Numerically simulated the temperature and velocity field in the arterial bifurcation during cryosurgery using finite element method.

Sep. 2011-Mar. 2012   Chinese Academy of Sciences, Beijing, China   Graduate Research Assistant

Numerical Simulation of Bioheat Transfer in Irregular Tissues (Two papers)

- Proposed a novel boundary condition scheme to extend the alternating direction implicit finite difference method using in irregular tissues.
- Developed Matlab programs to validate this new algorithm.

May 2011-Dec. 2011   University of Science and Technology Beijing, China   Undergraduate Research Assistant

Multi-scale Modeling of Therapeutic Brain Hypothermia and Whole Body

Hyperthermia (Three papers)
- ➤ Developed Matlab programs to calculate the temperature field in human body during therapy process. The lumped system analysis and finite difference method was used.

PUBLICATIONS

Journal Papers:
- • **X. Xue**, J. Liu. Multi-scale Modeling on Human Intravascular Cooling to Induce Brain Hypothermia via Circle of Willis. *Forschung im Ingenieurwesen-Engineering Research*, vol. 75, no. 4, pp. 257-269, 2011. (IF=0.381)
- • **X. Xue**, J. Liu. Mechanism Interpretation of the Biological Brain Cooling and Its Inspiration on Bionic Engineering. *Journal of Bionic Engineering*, vol. 8, no. 3, pp. 207-222, 2011. (IF=1.632)
- • **X. Xue**, Z. Z. He, J. Liu. Computational Study of Thermal Effects of Large Blood Vessels in Human Knee Joint. *Computers in Biology and Medicine*, vol. 43, no. 1, pp. 63-72, 2013. (IF= 1.240)
- • **X. Xue**, Z. Z. He, J. Liu. Detection of Water Ice Phase Transition Based on Raman Spectrum. *Journal of Raman Spectroscopy*, vol. 44, no. 7, pp. 1045–1048, 2013. (IF= 2.671)
- • **X. Xue**, H. H. Jin, et al. Quantifying the Growth Rate and Morphology of Ice Crystals Growing in Cryoprotectants via High Speed Camera and Cryomicroscope. *Journal of Heat Transfer-Transactions of the ASME*, vol. 137, no. 9, pp. 0910201-0910205, 2015. (IF= 1.450)
- • Z. Z. He, **X. Xue**, J. Liu. An Effective Finite Difference Method for Simulation of Bioheat Transfer in Irregular Tissues. *Journal of Heat Transfer-Transactions of the ASME*, vol. 135, no. 7, pp. 0710031-0710038, 2013. (IF=1.450)
- • Z. Z. He, **X. Xue**, et al. Anatomical Model Based Finite Element Analysis of the Combined Cryosurgical and Hyperthermic Ablation for Knee Bone Tumor. *Computer Methods and Programs in Biomedicine*, vol. 112, no. 3, pp. 356-366, 2013. (IF=1.897)

Conference Papers:
- • **X. Xue**, Z. Z. He, J. Liu. Investigation on the Effect of Protective Brain Cooling to the Temperature Increasing Behavior during Whole Body Hyperthermia. *World Congress on Medical Physics and Biomedical Engineering*, May 26-31, 2012, Beijing, China. *IFMBE Proceedings*, vol. 39, pp. 2150-2153, 2013.
- • Z. Z. He, **X. Xue**, et al. Evaluation on the Low Temperature Burning of Skin by a Notebook Computer. *Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition*, November 13-21, 2013, San Diego, California, USA.
- • Z. Z. He, **X. Xue**, et al. Alternation of Liquid Nitrogen Coolant: Extreme Freezing to Maximize Cryosurgical Ablation of Tumor. *Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition*, November 13-21, 2013, San Diego, California, USA.

SELECTED HONORS AND AWARDS
2013	Institute Scholarship, Chinese Academy of Sciences
2013	Merit Student of Technical Institute of Physics and Chemistry, Chinese Academy of Sciences
2008	Excellent Volunteers of Beijing Olympics and Beijing Paralympics
2008-2010	People's First Class Scholarship (3 times)
2007	Freshmen Scholarship

TECHNICAL SKILLS
Commercial Software	Petrel, Mangrove, Eclipse, Intersect, Ansys, Abaqus, QT
Programing Language	C++, Matlab, VBA
Language	English and Mandarin

WORK AUTHORIZATION
Eligible for Curricular Practical Training (F1 Visa)