PhD position on modeling hydrogen transport in subsurface porous media

A funded PhD student position is available in the Department of Petroleum Engineering at Texas Tech University, Texas, USA. The scholarship will support a PhD student with **$29,000 per year and waived tuition fees for four years**.

Research project:
The research will be focused on **numerical modeling of hydrogen transport in complex subsurface porous media.** Student will need to develop the numerical models with open-source simulator (preferred) or the commercial simulator to simulate the underground hydrogen migration and hydrogen-fluids-rock interactions in different geological conditions with low- and high-permeable layers, seals, fractures, etc. Student may also need to contribute to teaching activities with less than 10 hours per week.

Expected starting time:
- August 2023

Interviews begins:
- January 2023

Preferred qualifications:
- Strongly self-motivated with critical thinking ability;
- M.Sc. in Petroleum Engineering or Chemical Engineering or CFD;
- Research experiences in one of the following areas: modeling of single or multiphase flows in porous media, pore- or reservoir-scale simulations, and hydrogen kinetics;
- Familiar with one of the numerical methods: finite difference, finite element, finite volume, phase field modeling, DFN, or EDFM methods;
- Good at one of the simulators: MRST, OpenFOAM, Ansys Fluent, CMG, Eclipse, or PetroMod;
- Strong background with one of the computer programming languages: Fortran, C++, Python, or MATLAB.

Application:
Interested applicants please send your CV, transcripts, and English scores to Dr. Qingwang Yuan at Qingwang.Yuan@ttu.edu. More information about Dr. Yuan's group can be found at www.TheHopeGroup.Tech.