Stanford



Halldora Gudmundsdottir

Ph.D. Student in Energy Resources Engineering, admitted Autumn 2014

Bio

BIO

I am a Ph.D. candidate in the department of Energy Resources Engineering. My academic background is in mechanical engineering and project management with focus on geothermal production, numerical simulation and optimization. My professional experience includes designs of geothermal power plant modules and process optimizations. At Stanford, I am working with Prof. Roland Horne in the Geothermal Program on predictive modeling for geothermal purposes.

HONORS AND AWARDS

- Frank G. Miller Fellowship Award, Department of Energy Resources Engineering, Stanford University (Spring 2015)

EDUCATION AND CERTIFICATIONS

- M.S., KTH Royal Institute of Technology, Stockholm, Sweden , Project Management and Operational Development (2013)
- M.S., University of Iceland, Reykjavik, Iceland , Mechanical Engineering (2012)
- B.S., University of Iceland, Reykjavik, Iceland , Mechanical Engineering (2010)

LINKS

- LinkedIn: https://www.linkedin.com/in/halldorag
- ResearchGate: https://www.researchgate.net/profile/Halldora_Gudmundsdottir2
- GitHub: https://github.com/halldorag

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My PhD research focuses on developing predictive models for geothermal systems. I am interested in direct predictions of the future performance of geothermal reservoirs as well as characterization of the subsurface flow behavior that can aid in operational decision making. Currently, I am incorporating principles from statistics and artificial intelligence into workflows that can be used for production and injection optimization.

Publications

PUBLICATIONS

- **Reservoir Characterization and Prediction Modeling Using Statistical Techniques** *Stanford Geothermal Workshop*
  Gudmundsdottir, H., Horne, R. N.
  2018: 12

- **Fracture Characterization and Thermal Predictions Using Temperature and Tracer Data** *GRC Transactions, Vol. 41*
  Gudmundsdottir, H., Horne, R. N.
  2017: 11
- **The Wellbore Simulator FloWell–Model Enhancement and Verification** *World Geothermal Congress 2015*
  Gudmundsdottir, H., Jonsson, M. T.
  2015: 10
- **The Wellbore Simulator FloWell** *Stanford Geothermal Workshop*
  Gudmundsdottir, H., Jonsson, M. T., Palsson, H.
  2013: 9
- **A Coupled Wellbore-Reservoir Simulator Utilizing Measured Wellhead Conditions** *Stanford Geothermal Workshop*
  Gudmundsdottir, H., Jonsson, M. T., Palsson, H.
  2013: 9