

# Reza Khalilisenobari

44 Montgomery Street, Suite 1500, San Francisco, CA 94104  
[reza.khalilisenobari@ethree.com](mailto:reza.khalilisenobari@ethree.com)

415.391.5100

## **ENERGY AND ENVIRONMENTAL ECONOMICS, INC.**

San Francisco, CA

*Intern*

Mr. Khalilisenobari is a 2022 E3 intern supporting E3's resource planning project work. He is currently a fourth-year Ph.D. student and research assistant at Arizona State University. The main research topics he has explored during his Ph.D. studies are 1) portfolio allocation of large-scale battery energy storage systems across energy and ancillary services markets considering batteries' degradation cost; 2) adaptive stochastic expansion planning of power grid considering large-scale battery and solar units, and carbon emission policies; 3) bidding behavior analysis of electricity market participants through data-driven approaches (inverse reinforcement learning). In addition to his forthcoming Ph.D., Mr. Khalilisenobari holds an M.Sc. and B.Sc. from the Ferdowsi University of Mashhad.

## **QUANTA TECHNOLOGY**

Concord, CA

*Graduate Student Intern*

May 2021 – August 2021

- Assisted on various technical consulting projects:
  - Economic assessment of solar and battery units in the Western Interconnection
  - Electromagnetic field (EMF) analysis of transmission lines
  - Power flow model development and validation through PSLF
  - Expansion planning model adjustment and validation through PSLF and TARA

## **DOMINION ENERGY**

Richmond, VA

*Graduate Research Intern*

June 2020 – August 2020

- Analysis of the PV Generation Integration into the Black-start Cranking Paths
  - Modeling of black-start cranking path and PV systems in the RSCAD
  - Performing HIL based electromagnetic transient analysis
- Operation Scheduling of the Dominion Energy Microgrid
  - Reviewing microgrid operation requirements and its assets limitations
  - Developing an optimal operation scheduling module based on forecasted load and price
- Sizing and Placement of Dominion Energy Electric School Bus Charging Stations (Proposal)

## **SANE SHARGH COMPANY**

Mashhad, IRAN

*Undergraduate Intern*

July 2015 – September 2015

- Training in the modular substation's design, assembly, and quality control sections
- Gathering a detailed orientation booklet for instructing newly hired employees

## Education

|   |                                 |
|---|---------------------------------|
| Arizona State University<br><i>Ph.D., Electrical Engineering (Power Systems)</i>          | Tempe, AZ<br>Current            |
| Ferdowsi University of Mashhad<br><i>M.S., Electrical Engineering (Power Systems)</i>     | Mashhad, IRAN<br>June 2018      |
| Ferdowsi University of Mashhad<br><i>B.S., Electrical Engineering (Power Engineering)</i> | Mashhad, IRAN<br>September 2015 |

## Publications

- Reza Khalilisenobari and Meng Wu, **“Optimal Participation of Price-maker Battery Energy Storage Systems in Energy and Ancillary Services Markets Considering Degradation Cost,”** *International Journal of Electrical Power & Energy Systems (IJPES)*, vol. 138, June 2022.
- Reza Khalilisenobari and Meng Wu, **“Impact of Battery Degradation on Market Participation of Utility-Scale Batteries: Case Studies,”** in *52nd North American Power Symposium (NAPS)*, Tempe, Arizona, US, 2021.
- Reza Khalilisenobari and Meng Wu, **“Optimal Participation of Price-Maker Battery Energy Storage Systems in Energy, Reserve and Pay as Performance Regulation Markets,”** in *51st North American Power Symposium (NAPS)*, Wichita, Kansas, US, 2019.
- Reza Khalili Senobari, and Javad Sadeh, **“A Novel Numerical Index for Assessing Results of Frequency Response Analysis (FRA): an Experimental Study on Electrical Machines,”** in *52nd North American Power Symposium (NAPS)*, Tempe, Arizona, US, 2021.
- Reza Khalilisenobari, and Javad Sadeh, **“Electrical Machines’ Fault Detection through Frequency Response Analysis (FRA): A Comprehensive Experimental Study on a Wound-rotor Asynchronous Machine,”** *IET Electric Power Applications*, (Under review).
- Reza Khalili Senobari, Javad Sadeh and Hossein Borsi, **“Frequency Response Analysis (FRA) of Transformers as a Tool for Fault Detection and Location: A Review,”** *Electric Power Systems Research (EPSR)*, 155(2018), 172-183.
- Farid Fathnia, Navid Yektay, Mohammad Hossein Javidi Dasht Bayaz and Reza Khalili Senobari, **“Optimum Design for A Hybrid System with Respect to Cost and Reliability Based on Stochastic Methods,”** in *25th Iranian Conference on Electrical Engineering (ICEE)*, Tehran, Iran, 2017.
- Reza Khalili Senobari, Homayun Alizadeh Milanloo, and Mohammad Hossein Javidi Dasht Bayaz, **“Economic Evaluation of Application Areas of Fuel Cell,”** in *31st Power System Conference (PSC)*, Tehran, Iran, 2016.