

MOHAMED ALHAJ

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EDUCATION

2015-PRESENT

PHD IN SUSTAINABLE ENERGY

HAMAD BIN KHALIFA UNIVERSITY

- My PhD program is a multidisciplinary one and is focused on sustainability in science and engineering. I have studied courses in sustainability principles, advanced mathematics, optimization, and environmental life cycle assessment. My PhD thesis is on the techno-economic and environmental assessment of solar-driven desalination processes. My current CGPA is 3.77/4.0. I have five peer-reviewed publications and I also presented in three international conferences. I expect to graduate by December 2018.

2013-2014

MSc IN ENERGY TECHNOLOGY

THE NATIONAL UNIVERSITY OF MALAYSIA

- This MSc program was focused on solar energy technologies and system modelling. I have taken courses in solar PV systems modelling and optimization, energy economics and management, and energy policy. My MSc project was on the techno-economic assessment of solar-electric generation for remote areas. This project involved investigating the financial incentives for clean energy technologies. My CGPA was 3.79/4.0.

2009-2012

BENG FIRST CLASS HONOURS IN MECHATRONICS ENGINEERING

THE UNIVERSITY OF NOTTINGHAM

- As part of this multidisciplinary program, I have taken courses in electrical engineering, mechanical engineering, electronics, robotics, and business operations. My final year project was the development and modelling of a solar thermal collector.

PEER-REVIEWED PUBLICATIONS & CONFERENCE PROCEEDINGS

- **Mohamed Alhaj**, Alex Amato. Implementation of Rooftop Solar in Qatar: Lessons Learnt from SolarCity Business and Finance Models in the U.S. Qatar Found. Annu. Res. Conf. Proc., Doha: 2016. doi:doi.org/10.5339/qfarc.2016.EEPP2390.
- **Alhaj M**, Hassan A, Darwish M, Al-Ghamdi SG. A techno-economic review of solar-driven multi-effect distillation. Desal Wat Treat 2017;90:86–98. doi:10.5004/dwt.2017.21297.
- **Alhaj M**, Mohammed S, Darwish M, Hassan A, Al-Ghamdi SG. A review of Qatar's water resources, consumption and virtual water trade. Desal Wat Treat 2017;70:70–85. doi:10.5004/dwt.2017.21246.
- **Mohamed Alhaj**, Ashraf Hassan, and Sami G. Al-Ghamdi (2018). Solar Power Integration with Desalination: A Systematic Assessment of the Potential Environmental Impacts. Qatar Foundation Annual Research Conference Proceedings 2018: EEPP667. <http://doi.org/10.5339/qfarc.2018.EEPP667>.
- **Alhaj M**, Mabrouk A, Al-Ghamdi SG. Energy efficient multi-effect distillation powered by a solar linear Fresnel collector. Energy Convers. Manage 2018;171:576–86. doi.org/10.1016/j.enconman.2018.05.082.
- **Alhaj M**, Al-Ghamdi SG. Reducing Electric Energy Consumption in Linear Fresnel Collector Solar Fields Coupled to Thermal Desalination Plants by Optimal Mirror Defocusing. Heliyon 2018. *Accepted (In Press)*.

CONFERENCES PRESENTATIONS

- Poster presentation: "Implementation of Rooftop Solar in Qatar: Lessons Learnt from the SolarCity Business and Finance Models in the U.S." @ Qatar Foundation Annual Research Conference 2016.
- Speaker at the Qatar Green Building Conference 2016: "Implementation of rooftop solar PV in Qatar through the roof rental business model". This talk is part of a USGBC (U.S. Green Buildings Council) accredited continuing education hours for LEED professionals.
- Panelist at the "Smart Urban Water Management Event" hosted by Qatar Green Building Council (QGBC) and the Qatari Public Utility Company (Kahramaa) on March 2018.
- Conference Presentation at The International Symposium for Sustainable Systems and Technologies (ISSST 2018) Buffalo NY U.S.A: "Life Cycle Environmental Impacts of Solar-Driven Desalination"
- Conference Participation: Delegate at the Young Water Leaders Summit 2018. I was selected by the Singapore National Water Agency to participate in this summit which is part of the Singapore International Water Week 2018 (one of the largest events for the global water industry).

AWARDS

- 2016: Solar Energy Research Award. This award, by the Qatar National Research Fund (QNRF), was for a poster I presented during the Building-Integrated PV workshop.
- 2017: Qatar Sustainability Award – Green Research Category. This award was for one of my papers on: Policy recommendations for sustainable water resources management in Qatar. This paper is part of my PhD thesis. The award was given after a peer-review process by a number of sustainability academics and experts.
- 2018: Best Green Sustainable Initiative Award (Initiative on: Solar-driven Multi-effect Distillation). This award was given by the Qatari National Program for Conservation and Energy Efficiency (TARSHEED) under the Ministry of Energy and Industry. The award was granted by the Prime Minister of Qatar during the 6th anniversary ceremony of TARSHEED.

