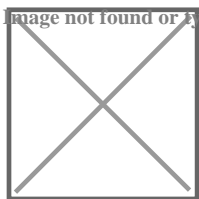


# Amirhossein Solat



Phd. Student  
Amirkabir University of Technology(AUT)  
(Tehran Polytechnic)

**Biography:** Amirhossein Solat is currently a Ph.D. student in power systems, Amirkabir university of technology (Tehran Polytechnic). He received his B.Sc. and M.Sc. degree from Tehran Polytechnic in 2016 and 2019, respectively (without any entrance exam). His main fields of research are Smart grids, Renewable Energy Resources, Control of Microgrids, Cyber-Attacks in Microgrids, and Demand Response.

**ResearcherId:**

**ScopusAuthorId:**

**Orcid:**

**Phone:** 09120680756

**Mobile:** 09120680756

**E-mail:** solat.ah@aut.ac.ir

**Website:**

**Address:** EE Department, Amirkabir University of Tech, Tehran, Iran

## Educational Records

### Ph.D

**Amirkabir University of Technology (AUT), Tehran Polytechnic**

**Thesis Title:** Resilient Frequency and Voltage Control of Isolated Microgrids for an Improved Performance Against FDI Cyber-Attacks Using Coordinated SoC of Batteries

Solat, Amirhossein (PI), B. Gharehpetian, Gevork (Supervisor), Salay Naderi, Mehdi (Supervisor), Anvari-Moghaddam, Amjad (Supervisor)

### Description

Today, microgrids are developing in new power grid structures. Due to need to produce clean energy from local generations such as PV and reducing pollution from generations based on fossil fuels, the use of renewable generations has increased. On the other hand, energy storage systems (ESS) along with these resources can modify their alternating nature and normalize the generation curve of resources by charging and discharging. In addition to this advantage, ESSs also play an important role in proper microgrid control. With the development of hierarchical control systems in microgrids, deployment of communications infrastructures has also expanded. Vulnerability of cyber-physical systems to the faults and cyber-attacks is one of the challenges in this field. For this reason, designing and applying resilient control for microgrids seems necessary and important. This PhD project aims to bridge the aforementioned gaps through resilient control of distributed generation (DG) resources and energy storage system (batteries) in microgrids which includes a new method for controlling SOC of batteries and secondary resilient control of the microgrid. Also, cyber-attacks will be detected and isolated through the suggested method.

#### **Active**

29/02/2024 ? 01/09/2019

## **M.Sc**

**Amirkabir University of Technology (AUT), Tehran Polytechnic**

**Thesis Title:** Investment Decisions on DER under Demand Side Management

Solat, Amirhossein (PI), Hosseinian, Seyed Hossein (Supervisor)

#### **Finished**

16/02/2019 ? 22/09/2016

## **B.Sc**

**Amirkabir University of Technology (AUT), Tehran Polytechnic**

**Thesis Title:** The Impact of Wind Farms on Power System Transient Stability

Solat, Amirhossein (PI), Vahidi, Behrouz (Supervisor)

#### **Finished**

21/09/2016 ? 22/09/2012

## **Teaching**

## **Publication**

## **Journal Papers**

NO	TITLE	YEAR
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## **Conference Papers**

NO	TITLE	YEAR
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## **Books**

NO	TITLE	YEAR
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## **Patents**

NO	TITLE	YEAR
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## **Industrial Projects**

NO	TITLE	YEAR
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## **Management/Administration Jobs**

## **Scientific Societies**

## **Awards**