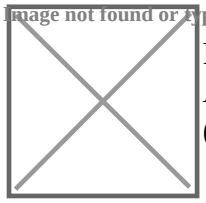
Amirhossein Solat



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 ?elds of research are Smart girds, 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

Conference Papers

NO	TITLE	YEAR

Books

NO	TITLE	YEAR

Patents

NO	TITLE	YEAR

Industrial Projects

NO	TITLE	YEAR

Management/Administration Jobs

Scientific Societies

Awards