



NEWSLETTER

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PNP-DCMG/RDC2MT Project kick-off meeting

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ABOUT RDC2MT

Research, Demonstration and Commercialisation of DC Microgrid Technologies (RDC2MT) is a four-year international collaborative research project (2017 to 2020) funded by EU H2020 RISE program, and aims to address new challenges of low voltage DC microgrids.

PNP-DCMG/RDC2MT PROJECT KICK-OFF MEETING AND WORKSHOP

RDC2MT project Chinese partners successfully secured match funding from Chinese Ministry of Science and Technology (MOST) with the project titled “Plug-and-Play Operation principle and integration Application of Structured DC based Microgrid” (PNP-DCMG). Prof. Xiangning He from Zhejiang University is the PI of this RDC2MT match funding project.

On 23rd and 24th of November 2018, PNP-DCMG/RDC2MT project kick-off meeting was held in Zhejiang University, China. Prof. Xiangning He chaired meeting and introduced the PNP-DCMG project. Prof. Bauer from TU Delft and Michiel Paul Arnoldy from DCBV attended meeting and introduced their latest research activities. Dr Zhengyu Lin from Aston University presented the RDC2MT project progress and future plans. Project future secondments plan were reviewed and discussed in this meeting.

After the kick-off meeting, a project workshop was held. In this workshop, Dr Guipeng Chen from Xiamen University gave a tutorial, entitled “New Power Electronic Technologies for DC Microgrid Applications”, which includes two technical sessions, “Fault-Tolerant LLC Converter” and “Programmable Topology Derivation of Integrated Three-Port Converters”. After that, three research students presented their research work in DC microgrids. A Zhejiang University power electronics lab tour was also organized.



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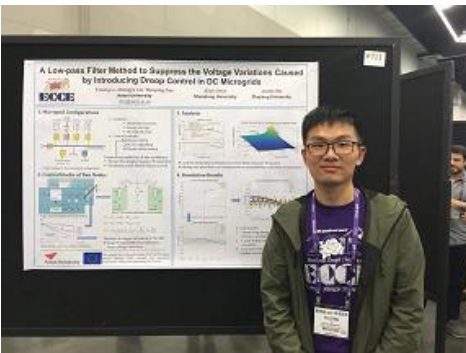
Prof. Bauer and Michiel Arnoldy visit SHU



Zhi Qiao and Prof. Wang in SHU lab



Dr Bin Xu in ICAE 2018



Fulong Li in ECCE 2018



Zhi Qiao in APSCOM 2018

SHANGHAI UNIVERSITY JOINED RDC2MT CONSORTIUM

RDC2MT project grant agreement amendment request has been approved by European Commission, and Shanghai University (SHU) of China now an official project partner of RDC2MT project.

Shanghai University is one of the Chinese leading research universities. The project team is led by Prof. Fei Wang, and is part of the Shanghai Key Lab of Power Station Automation Technology. The team has built a microgrid laboratory equipped with a whole set of equipment such as programmable grid emulator, energy-storage emulator, PV/Wind emulator, and electronic loads. Besides, there is also a set of AC/DC hybrid microgrid consisting of practical power converters and energy management platform.

SHU team has been active in RDC2MT project since the midterm meeting. Aston University Ph.D student Zhi Qiao has just completed his 2-month secondment in SHU, and Prof. Bauer (TU Delft) and Michiel Arnoldy (DCBV) visited SHU in November 2019.

PROJECT DISSEMINATION

RDC2MT project has produced many research outcomes, and RDC2MT researchers were busy to disseminate the research outcomes in the world.

In August 2019, Dr Bin Xu, Dr Jin Xuan and Dr Huizhi Wang attended conference [ICAIE 2018](#) in Hong Kong. In September, Fulong Li from Aston University attended IEEE conference [ECCE 2018](#) in Portland, USA. In October, Muhannad Alshareef from Aston University attend IEEE conference [ICRERA 2018](#) in Paris, France. In November, Zhi Qiao from Aston University attended IET conference [APSCOM 2018](#) in Hong Kong. Also, in September, we were invited to attend H2020 RISE project GreenDC's 1st project workshop in Ionian University, Corfu, Greece.

All conference papers can be downloaded from our [project website](#).

FUNDING APPLICATION SUCCESS

Dr Huizhi Wang and Dr Zhengyu Lin have been both success in the UK EPSRC-UKRI Innovation Fellowship applications. They have been awarded more than 1.2 million pounds in total to undertake research in Battery energy storage (Dr Wang) and low voltage DC microgrids (Dr Lin) in their three-year Fellowships.

NEW PUBLICATIONS

Y. Zhu, J. Wu, R. Wang, Z. Lin, and X. He, 'Embedding Power Line Communication in Photovoltaic Optimizer by Modulating Data in Power Control Loop', IEEE Transactions on Industrial Electronics, IEEE Transactions on Industrial Electronics 66 (5), 3948-3958 ([Zenodo download](#))

M. Alshareef and Z. Lin, "A Constant Grid Interface Current Controller for DC Microgrid", 7th International Conference on Renewable Energy Research and Applications 2018 (ICRERA 2018), Paris, France, October 2018 ([Zenodo download](#))

Z. Qiao, J. Yang, and J. Li, "Local Peer-to-Peer Energy Transaction Framework Based on Time of Using Pricing Scheme", The 11th IET International Conference On Advances In Power System Control, Operation And Management (APSCOM), Hong Kong, Nov 2018 ([Zenodo download](#))