

IFEC 2020

2020 International Future Energy Challenge
College Student Competition <http://energychallenge.weebly.com/>

Call for Proposals

Steering Committee Chair

Giri Venkataramanan, UW-Madison

General Chair

Huai Wang, Aalborg University

General Co-chair

Yongheng Yang, Aalborg University

Publicity Chair

Ariya Sangwongwanich, Aalborg University
Mads Graungaard Taul, Aalborg University

Finance Chair

Ching-Jan Chen, National Taiwan University

Sponsored by:



Please visit

<http://energychallenge.weebly.com/>
for more information about schedule and proposal submission, as well as the latest updates.

IFEC Introduction

IFEC is an international student competition for innovation, conservation, and effective use of electrical energy, which is open to college and university student teams from recognized undergraduate engineering programs in any location.

The competition is sponsored by the Institute of Electrical and Electronics Engineers (IEEE) Power Electronics Society (PELS), Power & Energy Society (PES), Industry Application Society (IAS) and Power Sources Manufacturers Association (PSMA).

Topic: Power Supply for Nano Satellites

Preliminary Specifications:

- 2x DC inputs: Max power < 60 W, Max current < 3 A, voltage 20 V
- 3x DC outputs: 3.3 V @ 5 A, 5 V @ 4 A, and 8 V @ 2600 mAh
- Functionalities: MPPT control (uniform and non-uniform solar irradiance)
- Functionalities: Battery charging and discharging
- Judgment criteria: Functionality, efficiency, power density, and cost.

Final Competition Location

Aalborg University, Aalborg, Denmark

Participation

Participation is on a proposal basis. Those schools that are interested must submit a proposal to the topic chair before the proposal deadline. Each Proposal will be judged by a distinguished panel of volunteer experts from the IEEE and from industry. Schools with successful proposals will be notified and qualified for the rest of the competition. Deadline for each period will be posted on the IFEC website. The finalist teams will be invited to a competition event in summer of 2020.

There will be a Grand Prize of \$10,000 and three additional awards granted at \$5,000, \$3,000 and \$1,000 each. Competition will include design aspects, dynamometer testing and riding on race-track.

Important Notice:

- ◇ Each university can support only one team.
- ◇ Each team should have at least 4 members.
- ◇ Interdisciplinary teams are encouraged.
- ◇ Teams should be composed of primarily undergraduate students.
- ◇ Graduate students can participate in team to provide high-level support.

Schedule

Workshop at ECCE 2019	September 29, 2019
Proposal Deadline	October 25, 2019
Notification of Acceptance	December 21, 2019
Workshop at APEC 2020	March 15, 2020
Notification of Finalists	April 15, 2020
Final Competition	July 20-22, 2020

