CALL FOR COMPETITION

Heuristic optimization has undergone significant developments in recent years. By using different novel mechanisms for improved search exploration and exploitation, modern heuristic optimization tools have demonstrated a great promise for solving real world problems with high mathematical complexity.

The Working Group on Modern Heuristic Optimization under the IEEE PES Analytic Methods in Power Systems (AMPS) Committee is organizing a Panel Session combined with a Competition titled:

“Emerging heuristic optimization algorithms for expansion planning and flexibility optimization in sustainable electrical power systems”

The session will be held at the 2019 IEEE PES General Meeting. This panel will introduce a new testbed concerning with optimal transmission expansion planning. The testbed is based on three benchmark systems of different characteristics and size. All interested researchers are kindly invited to be part of this initiative and to ascertain the effectiveness of their algorithms.

All interested participants are encouraged to send an email to j.l.ruedatorres@tudelft.nl by 30 November 2018, indicating their names, affiliation, and the algorithm to be used.

The problem definitions and implementation guidelines as well as Matlab codes for the testbed can be downloaded from http://sites.ieee.org/psace-mho/files/2018/11/test_bed_TEP_V01.zip.
Final results should be submitted to this email address until **1 March 2019** in accordance with the guidelines provided. The implementation codes of each algorithm entering the competition should also be submitted along with final results. The submitted codes will be in the public domain and no intellectual property claims should be made.

The organizers will announce the codes together with a comparative analysis based on the provided results by 30 March 2019 at [http://sites.ieee.org/psace-mho/2019-expansion-planning-and-flexibility-optimization-in-sustainable-electrical-power-systems-competition-panel/](http://sites.ieee.org/psace-mho/2019-expansion-planning-and-flexibility-optimization-in-sustainable-electrical-power-systems-competition-panel/). The first three ranked algorithms will be selected for presentation at the panel, for which only PowerPoint presentations are required.

**Important dates:**
- Call for competition: **15 November 2018**
- Confirmation of participation: **15 December 2018**
- Submission of results and codes: **1 March 2019**
- Announcement of best three ranked algorithms: **30 March 2019**
- 2018 IEEE PES General meeting: **4-8 August 2019**

**Panel Organizers:**
- Dr. José Rueda
  Delft University of Technology, Netherlands
  Email: j.lruedatorres@tudelft.nl

- Dr. Santiago Torres
  University of Cuenca, Ecuador
  Email: santiago.ieee@gmail.com

- Dr. Sergio Rivera
  Universidad Nacional de Colombia, Colombia
  Email: srriverar@unal.edu.co