

Scope of the Intelligent Control Systems Task Force

Intelligent Systems Subcommittee (IS)

Power Systems Analysis, Computing and Economics Committee (PSACE)

Background

At the subcommittee meeting at PES2004 in Denver on June 7, 2004, it was suggested to create a task force on intelligent control. Dr. G K Venayagamoorthy was invited to submit a scope and to serve as the first chair of this task force. Approval will be sought at IS Subcommittee meeting and the PSACE Committee meeting which take place 10/12/04 and 10/13/04.

Scope

Intelligent control of power systems includes the application of computational intelligence techniques such as neural networks, fuzzy logic, evolutionary computing, swarm intelligence and adaptive critic designs for the control and optimization of all the elements that make up a power system ranging from the power plant through the transmission and distribution networks to the end user.

This task force should:

- Develop and standardize terminologies and definitions, and publish reports in appropriate PES Transactions.
- Recommend areas of research.
- Organize panel sessions at various PES meetings.
- Organize special sessions at various PES meetings.
- Organize tutorials at various PES meetings.
- Report on task force activities to the subcommittee.
- Assist conference organizers and Transactions Editors with paper reviews.

Meetings of the Task Force

The task force will meet at least once a year, usually at the PES General Meeting in time to report to the subcommittee. The minutes of this meeting will be sent out to all members and others interested.

The following researchers have agreed to serve as members of Task Force

1. Dr. Ganesh K Venayagamoorthy, University of Missouri-Rolla, USA.
2. Dr. Ronald Harley, George Institute of Technology, Atlanta, USA.
3. Mr. Salman Mohagheghi, George Institute of Technology, Atlanta, USA.
4. Ms. Yamille del Valle, George Institute of Technology, Atlanta, USA.

5. Mr. Wei Qiao, George Institute of Technology, Atlanta, USA.
6. Mr. Swakshar Ray, University of Missouri-Rolla, USA.
7. Mr. Xiaomeng Li, University of Missouri-Rolla, USA.
8. Mr. Bruce Burton, University of KwaZulu Natal, South Africa.

We intend to invite the following additional researchers and welcome additional suggestions.

1. Dr. Dagmar Niebur, Drexel University, Philadelphia, USA
2. Dr. Djalma Falcao, CEPTEL, Rio de Janeiro, Brazil.
3. Dr. Alex de Silva, Federal University of Rio de Janeiro (COPPE), Brazil.
4. Dr. Kwang Lee, Penn State University, USA.
5. Dr. O P Malik, University of Calgary, Canada.
6. Dr. Aziz Rahman, University of Newfoundland, St. Johns, Canada.
7. Dr. Ahmed Rubaai, Howard University, Washington DC, USA.
8. Dr. Malik Elbulak, USA.
9. Dr. Mohammed El-Sharkawi, University of Washington, Seattle, USA.
10. Dr. Karen Butler, Texas A & M, College Station, USA.
11. Dr. Damien Flynn, Queens University, Belfast, Ireland.
12. Dr. Innocent Davidson, University of KwaZulu Natal, South Africa.
13. Dr. Aliyu Usman, Abubakar Tafawa Balewa University, Nigeria.
14. Dr. Kevin Tomsovic, Washington State University, USA.

Scope submitted by

Dr. Ganesh K Venayagamoorthy
Chair-elect of the Intelligent Control Systems Task Force
September 20, 2004.