Romanian Academy 2016 "Grigore Moisil" Award

Radu-Emil PRECUP, Radu-Codruţ DAVID, Ştefan PREITL & Mircea-Bogdan RĂDAC

The "Grigore Moisil" Prize from the Romanian Academy has been awarded to Prof. Radu-Emil PRECUP (Department of Automation and Applied Informatics (DAAI)), Dr. Radu-Codrut DAVID (Sustainanalytics), Prof. Emil M. PETRIU (University of Ottawa, Canada), Prof. Stefan PREITL (DAAI) and Lect. Dr. Mircea-Bogdan RĂDAC (DAAI), for the following group of papers published in 2014 and generically called Optimization of fuzzy systems:

• R.-E. Precup, R.-C. David, E. M. Petriu, M.-B. Rădac, S. Preitl, Adaptive GSA-based optimal tuning of PI controlled servo systems with reduced process parametric sensitivity, robust stability and controller robustness, IEEE Transactions on Cybernetics, vol. 44, no. 11, pp. 1997-2009, 2014, impact factor = 4.943.
• R.-E. Precup, R.-C. David, E. M. Petriu, S. Preitl, M.-B. Rădac, Novel adaptive charged system search algorithm for optimal tuning of fuzzy controllers, Expert Systems with Applications, vol. 41, no. 4, part 1, pp. 1168-1175, 2014, impact factor = 2.981.
• R.-C. David, R.-E. Precup, E. M. Petriu, S. Preitl, M.-B. Rădac, L.-O. Fedorovici, Adaptive evolutionary optimization algorithms for simple fuzzy controller tuning dedicated to servo systems, in: Fuzzy Modeling and Control: Theory and Applications, F. Matia, G. N. Marichal and E. Jimenez, Eds., Atlantis Computational Intelligence Systems, vol. 9 (Atlantis Press and Springer-Verlag), pp. 159-173, 2014.

The awarded group of papers proposes nature-inspired evolutionary-based optimization algorithms. These algorithms are applied to the optimal tuning of fuzzy controllers for a class of nonlinear servo systems. Fuzzy control systems with a reduced parametric sensitivity are obtained. This can be of large importance for many fuzzy logic, control, modeling, optimization and expert systems applications, as they are also applied to the optimal tuning of fuzzy models that characterize the nonlinear dynamics specific to processes in technical and non-technical fields. These papers are a product of the joint cooperation between two universities, and a part of this cooperation is supported by research contracts. These papers are highly appreciated and cited by specialists who actively work in automatic control, optimization and systems modeling.

ACADEMIA ROMÂNĂ

acordă

Premiul Grigore Moisil

pentru

Grup de 3 lucrări: Contribuţii la optimizarea sistemelor fuzzy

Autor: Mircea-Bogdan Rădac (în colectiv)

Preşedinte
Acad. Ionel-Valentin Vlad

16 decembrie 2016