

## **Machine Learning in psychological data analysis – A cognitive systems engineering approach**



### **Associate Professor PhD Dana Rad**

Aurel Vlaicu University of Arad, Romania

Faculty of Educational Sciences, Psychology and Social Sciences

Head of Center of Research Development and Innovation in Psychology

**Abstract:** Cognitive Systems Engineering (CSE) is a multidisciplinary human-centered approach to the study, design, and assessment of complex socio-technical systems in real-world settings that include people and technology. This presentation describes an endeavor to investigate the efficacy of a Cognitive Systems Engineering Approach using unsupervised Fuzzy C-Means technique, Exploratory Factor Analysis and Network Analysis in assessing the robustness of a psychological Profiling Scale.

Dana Rad, PhD. is Associate Professor in the Faculty of Educational Sciences, Psychology and Social Sciences at Aurel Vlaicu University of Arad, Romania. She is Head of Center of Research Development and Innovation in Psychology. She holds a double specialization in Psychology (*PhD* in Applied Cognitive Psychology) and Systems Engineering (*PhD* student in Systems Engineering). She was a Visiting Professor at Instituto Superior Miguel Torga in Coimbra and Instituto Politecnico Portalegre, Portugal and at University of Oviedo, Spain and research scientist

in more than 20 European Union funded projects. She is member in the editorial review board of 13 International Journals. Her research interests include Applied Cognitive Sciences, Cognitive Systems Engineering, Organizational Psychology, Fuzzy logic, Neural Networks, Psychoinformatics, Digital Wellbeing, Education for Sustainable Development - ESD. She is coauthor of 20 books and more than 175 international conferences and journal papers. She is a member of IANLP, IACAT, IAENG, COPSI and APA. Dr. Dana Rad is registered as autonomous psychologist with the right to practice freely in the specializations: clinical psychology, educational psychology, school and vocational counseling, and work and organizational psychology, and practicing psychologist in supervision in the specializations: applied psychology in the field of national security and applied psychology in services.

Publications:

[https://www.researchgate.net/profile/Dana\\_Rad](https://www.researchgate.net/profile/Dana_Rad)

<https://orcid.org/0000-0001-6754-3585>

<https://www.webofscience.com/wos/author/record/988853>

<https://scholar.google.ro/citations?user=wFUQjhsAAAAJ&hl=en>

<https://www.scopus.com/authid/detail.uri?authorId=57024019400>

Dana Rad PhD - Aurel Vlaicu University of Arad, *Faculty of Educational Sciences, Psychology and Social Sciences, Center of Research Development and Innovation in Psychology*, Romania, [dana@xhouse.ro](mailto:dana@xhouse.ro), +40-727-803036.

*Address:* B-dul Revoluției nr. 77, 310130 Arad, Romania, P.O. BOX 2/158 AR; Telephone: +40-257-219555