DOCS' 2022 Special Session 9 on

"Stochastic configuration networks for industrial data analytics"

Scope and Aim:

As a class of randomized learner model, stochastic configuration networks (SCNs) can be incrementally built in the light of a supervisory mechanism, and the resulting learner model ensures the universal approximation property at algorithmic level. The feature of SCNs lies in stochastic assignment of random parameters in model building, fast and low-cost model implementation in software and hardware respectively. Today, the world of industry is witnessing an evolved era of big data, the pressing task ahead is thus to require the learner models with fast construction and low model complexity for industrial data analytics. It is no doubt that SCNs is one of the most suitable tools for industrial AI. This special session aims to exchanging some updated progresses on both algorithm development and industrial case studies. We make such a special session at DOCS'22 to draw domain workers' attention on this powerful tool for data modelling. Welcome everyone to join us for discussions and potential collaboration opportunities.

Submission port at **https://docs2022.github.io/**

Session Code: mtz2gF (please use it as you submit your draft or long abstract)

Topics (Topics of interest include but are not limited to):

- Theoretical studies on stochastic configuration networks
- Benefit from randomness
- Model complexity, robustness, reliability and consistency
- Recurrent stochastic configuration networks
- Convolutional stochastic configuration networks
- Federated learning, distributed learning, ensemble learning
- One-class learning and semi-supervised learning
- Industrial soft-sensor and process modeling

Important Dates

Paper submission: March 1, 2022

Notification of acceptance: March 15, 2022

Camera-ready copy and author registration: April 15, 2022

Conference: May 27-29, 2022

Organizers

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