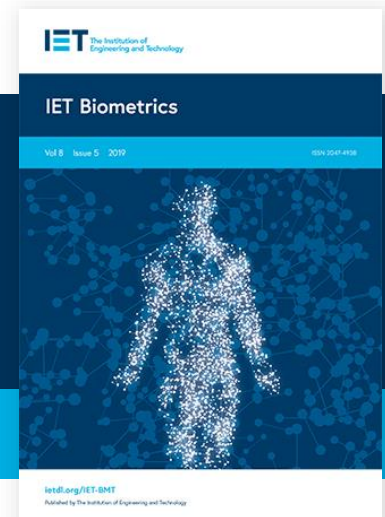


IET Biometrics

Call for Papers

Submission Deadline: September 1st 2022 | **Publication Date:** January 2023



Editor-in-Chief: Paulo Correia, Instituto Superior Técnico, Portugal
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Special Issue on: Explainable Artificial Intelligence for Biometrics

The "xAI4Biometrics - 2nd Workshop on Explainable & Interpretable Artificial Intelligence for Biometrics" - embraced by the WACV 2022 Conference, was held on January 5, 2022, as a Virtual Event.

Authors of selected papers presented at the workshop are invited to submit extended versions to this Special Issue. We are also inviting original research work focused on biometrics and that promote the interpretability and explainability of AI methods. Topics include, but are not limited to, the following development of methods: a) to interpret the biometric models to validate their decisions, as well as to improve the models and detect possible vulnerabilities; b) to assess and compare different explanations of the automatic decisions; c) to generate better explanations; and d) that are more transparent quantitatively and objectively.

Topics of interest include, but are not limited to:

- Methods to interpret biometric models to validate their decisions as well as to improve the models and to detect possible vulnerabilities.
- Quantitative methods to objectively assess and compare different explanations of automatic decisions.
- Methods and metrics to study/evaluate the quality of explanations obtained by post-model approaches and improve the explanations.
- Methods to generate model-agnostic explanations.
- Transparency and fairness in AI algorithms avoiding bias.
- Interpretable methods able to explain decisions of previously built and unconstrained (black box) models.
- Inherently interpretable (white-box) models;
- Methods that use post-model explanations to improve the models' training.
- Methods to achieve/design inherently interpretable algorithms (rule-based, case-based reasoning, regularization methods);
- Studies on causal learning, causal discovery, causal reasoning, causal explanations, and causal inference.
- Natural Language generation for explanatory models.
- Methods for adversarial attacks detection, explanation and defence.
- Applications of all the above including proof-of-concepts and demonstrators of how to integrate explainable AI into real-world workflows and industrial processes.
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