

## **SPECIAL ISSUE on**

### **Recent Advances in Biometrics Based on Biomedical Information**

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#### DESCRIPTION

This special issue in [Open Computer Science](#) focuses on Recent Advances in Biometrics Based on Biomedical Information.

Biometrics can be defined as a technology which recognizes individuals by their physical or behavioral characteristics. This common definition is often employed by considering Biometrics as a security solution to deal with the identification or verification of individuals. Nowadays, Biometric technology is not restricted to law enforcement or government departments by identifying criminals or by controlling borders, but it is also accessible and used in almost everyday life. It allows a more secure access as well as making our life easier. Due to the fact that Biometric systems are commonly integrated into general purpose devices such as smartphones and computers, the attitude of the general public has changed towards them because it has become more acceptable. In addition, the commercial Biometric industry is still growing and is continually being innovated, so it is not surprising the conventional metal key and passwords will not be used anymore as we know it today.

Recently, a new class of Biometrics using biomedical traits has emerged. It includes the electrical signal of the brain (EEG), the muscle (EMG) or the heart (ECG), as well as other measurements from the hidden part of the human body, already adopted in biomedical applications such as heartbeat, vein, sclera vein and DNA. In addition to the previously mentioned modalities, multi-modal biomedical biometric and information fusion are also taken into consideration. Besides their uniqueness, biomedical traits are confidential and secure to an individual. They are difficult to mimic and hard to be copied. Therefore, the identity of an individual is unlikely to be forged, thus preserving the secrecy and privacy of the users.

The aim of the proposed Special Issue is to promote research and reflect the most recent advances in biomedical traits for personal human identification with the emphasis on the following aspects, but certainly not limited to:

- Machine learning and deep learning for biomedical-based biometrics
- Electromyogram based Biometrics
- Electrocardiogram based Biometrics
- X-ray imaging and Magnetic Resonance Imaging based Biometrics
- Behavioral of Biometrics: emerging modalities
- Multimodal approaches in biomedical-based biometrics
- Machine Learning for Biomedical, Behavioral and Hidden Biometrics
- Deep Learning for Biomedical, Behavioral and Hidden Biometrics

- Fraud detection in biomedical-based biometrics
- Data protection and data privacy
- Ethical and social implications of biomedical-based biometrics
- Usability and accessibility in biomedical-based biometrics
- Trustworthiness and reliability in biomedical-based biometrics

Authors are requested to submit their full revised papers complying the general scope of the journal. The submitted papers will undergo the standard peer-review process before they can be accepted. Notification of acceptance will be communicated as we progress with the review process.

## HOW TO SUBMIT

Before submission authors should carefully read the [Instruction for Authors](#), available online.

Manuscripts can be written in TeX, LaTeX (strongly recommended) - the journal's [LATEX template](#). Please note that we do not accept papers in Plain TEX format. Text files can be also submitted as standard DOCUMENT (.DOC) which is acceptable if the submission in LATEX is not possible. **For an initial submission, the authors are strongly advised to upload their entire manuscript, including tables and figures, as a single PDF file.**

All submissions to the Special Issue must be made electronically via online submission system Editorial Manager: <http://www.editorialmanager.com/opencs/>

All manuscripts will undergo the standard peer-review process (single blind, at least two independent reviewers). **When entering your submission via online submission system please choose the option “SI: Recent Advances in Biometrics Based on Biomedical Information “.**

Submission of a manuscript implies that the work described has not been published before and it is not under consideration for publication anywhere else.

**The deadline for submissions is November 25, 2023**, but individual papers will be reviewed and published online on an ongoing basis.

Contributors to the Special Issue will benefit from:

- Critical peer-review
- no space constraints
- quick online publication upon completing the publishing process (**continuous publication model**)
- better visibility due to **Open Access** – free, unrestricted and permanent access to all the content
- **liberal policies on copyrights** (authors retain copyrights) and on self-archiving (no embargo periods)
- promotion of published papers to readers and citers
- **long-term preservation** – content archiving with Portico

We are looking forward to your submission!

In case of any questions please contact [Editorial Office](#) ([opencomputerscience@degruyter.com](mailto:opencomputerscience@degruyter.com))