Guest Editorial Special Issue on Sensors for Body Temperature Measurement and Monitoring in a Time of Pandemic

COVID-19 has demonstrated how vulnerable our society remains when it comes to managing a pandemic. There is an urgent need to develop and evaluate new technologies, materials, and methods for rapid measurement and continuous monitoring of body temperature, and accurate detection of elevated body temperature as a symptom of conditions which may lead to a pandemic.

This Special Issue of the IEEE SENSORS JOURNAL is devoted to the presentation of innovations and improvements in the field of human and animal body temperature measurement and monitoring including theory, design, modeling, fabrication, configuration, characterization, manufacturing, data analysis, and applications. Original research contributions and review papers were pursued in a number of areas including body temperature sensor (BTS) theory, design, and modeling, BTS circuits and systems, BTS materials, processing, fabrication, and packaging, BTS types, new BTS technologies, wearable and implantable BTS and systems, remote BTS and systems, BTS characterization and evaluation, BTS signal processing and data collection, low power and miniaturized BTS, BTS networks, the Internet of Things (IoT), and data security, algorithms and tools for body temperature screening, elevated body temperature detection using artificial intelligence, and health applications of body temperature measurement and monitoring.

The Guest Editors received 14 submissions and accepted six articles for publication. The accepted articles are titled: "A Customizable Thermographic Imaging System for Medical Image Acquisition and Processing" [A1], "A Novel Miniaturized Sandwich-Like Sensor for Continuous Measurement of Core Body Temperature" [A2], "Correction of Human Forehead Temperature Variations Measured by Non-Contact Infrared Thermometer" [A3], "Cost-Effective, Disposable, Flexible, and Printable MWCNT-Based Wearable Sensor for Human Body Temperature Monitoring" [A4], "Monitoring Social Distancing in Queues Using Infrared Array Sensor" [A5], and "Technologies for Fever Screening in the time of COVID-19: A Review" [A6].

The Guest Editors thank the authors for submitting their contributions for consideration for publication in this Special Issue, and the reviewers for their efforts to ensure that the accepted articles meet the quality of IEEE SENSORS JOURNAL. The Guest Editors also thank Prof. Gerald Gerlach, Leigh Ann Testa, and the IEEE SENSORS JOURNAL staff for their support toward the publication of this unique Special Issue.

Due to space limitations, the names of the contributing Guest Editors have been provided in the form of a list, instead of full affiliations and e-mails.

PROF. ABBAS KOUZANI
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APPENDIX: RELATED ARTICLES

[A1] J. A. Leñero-Bardallo, R. de la Rosa-Vidal, R. Padial-Allué, J. Ceballos-Cáceres, Á. Rodríguez-Vázquez, and J. Bernabéu-Wittel, "A customizable thermographic imaging system for medical image acquisition and processing," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16730–16741, Sep. 2022.

[A2] X. Ren, C. Zhou, and X. Ye, "A novel miniaturized sandwich-like sensor for continuous measurement of core body temperature," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16742–16749, Sep. 2022.

[A3] A. Shajkofci, "Correction of human forehead temperature variations measured by non-contact infrared thermometer," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16750–16755, Sep. 2022.

[A4] K. Thiyagarajan, G. K. Rajini, and D. Maji, "Cost-effective, disposable, flexible, and printable MWCNT-based wearable sensor for human body temperature monitoring," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16756–16763, Sep. 2022.

[A5] M. Rezzouki, S. Ouajih, and G. Ferré, "Monitoring social distancing in queues using infrared array sensor," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16764–16771, Sep. 2022.

[A6] S. D. Adams, A. Valentine, T. K. Bucknall, and A. Z. Kouzani, "Technologies for fever screening in the time of COVID-19: A review," *IEEE Sensors J.*, vol. 22, no. 17, pp. 16720–16729, Sep. 2022.

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