

## Special Issue

# Emerging Trends of Deep Learning in Medical Imaging: Challenges and Methodologies

### Message from the Guest Editors

The last decade has seen the increasingly important, even dominant, application of deep learning (DL) in the field of medical image analysis to examine the structure and assess the function of human organs and/or to provide early prediction and assessment of diseases. This Special Issue calls for recent studies and research work focusing on deep learning applications for medical image analysis. Papers of both theoretical and applicative nature are welcome, as well as high-quality review and survey papers for the medical image analysis research community. Major topics of interest include but are not restricted to: deep and transfer learning for medical data, augmented and hybrid deep learning tools, optimization techniques for deep learning architectures, and deep learning application for big medical data.

---

### Guest Editors

Dr. Fahmi Khalifa

Assistant Professor, Mansoura University, Egypt and Postdoctoral associate, University of Louisville, USA

Dr. Ahmed Shalaby

University of Louisville, USA

Dr. Ahmed Soliman

Research Scientist, University of Louisville, Louisville, KY, USA

---

### Deadline for manuscript submissions

closed (20 December 2021)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/65611](https://mdpi.com/si/65611)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[appls@mdpi.com](mailto:appls@mdpi.com)

[mdpi.com/journal/](https://mdpi.com/journal/appls)

[appls](https://appls)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )