Discover Imaging

Editorial

Inaugural Editorial for Discover Imaging

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1 Introduction

Welcome to *Discover Imaging*, a fully open access journal within the *Discover* series, covering all aspects of imaging research across a broad range of disciplines.

Imaging in its various forms plays a pivotal role across multiple disciplines in science, technology, and medicine. It is undeniable that advancements in the biological and medical sciences closely correlate with the evolution of computers and consequently of imaging technologies at the scientists' disposal.

Throughout human history, we as a species have worked to understand the world through the most basic action—by observing what is around us. Over time, we began innovating and inventing tools that helped us better observe the natural world. Imaging science exemplifies this progression, evolving significantly, from analogical imaging to the current digital era, from the observations of Robert Hooke in the seventeenth century to today's highly advanced digital tools. These contemporary tools afford us unprecedented insights into the intricate processes occurring within cells and organisms, operating across various temporal and spatial scales—from the microscopic to the mesoscopic and macroscopic levels.

Simultaneously, the increasing volume of data acquired from diverse imaging devices necessitates robust non-AI and AI-driving frameworks for effective quantification and analysis. This integration propels the rapid evolution of imaging methodologies, enhancing their utility, and expanding their application across scientific disciplines. Keeping this in mind, *Discover Imaging* was launched to be an open access home for all articles relevant to imaging research across all scientific disciplines. The journal aims to be a trusted resource for academics, researchers, healthcare professionals, and policymakers for research and advancements in imaging research.

1.1 Topics

Discover Imaging welcomes submissions from all fields of research within the following subject areas:

- Fundamental imaging techniques
    - Magnetic resonance imaging (MRI)
    - Computed tomography (CT)
    - Positron emission tomography (PET)

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- Ultrasound
- Radiography
- Optical imaging
- Electron microscopy

- Advanced imaging modalities
  - Functional MRI (fMRI)
  - Diffusion-weighted imaging (DWI)
  - Molecular imaging
  - Thermal imaging
  - Spectroscopy
  - Fluorescence microscopy

- Imaging analysis and processing
  - Image reconstruction
  - Image segmentation and classification
  - Machine learning and artificial intelligence in imaging
  - Radiomics and feature extraction
  - Quantitative imaging analysis

- Clinical and translational imaging
  - Diagnostic imaging
  - Interventional radiology
  - Imaging in surgery and therapy
  - Pediatric and geriatric imaging considerations
  - Preclinical imaging and animal models
  - Neuroimaging
  - Cardiovascular imaging
  - Imaging in infectious diseases and inflammation

- Future trends and innovations
  - Point-of-care imaging, imaging in telemedicine, remote diagnostics
  - Augmented and virtual reality in imaging
  - Wearable imaging devices
  - Emerging imaging technologies and modalities
  - Geophysical imaging
  - Forensic imaging
  - Imaging in astronomy

The full list of topics covered within the scope of the journal can be found here.

1.2 Editorial board

The Editorial Board for *Discover Imaging* comprises researchers with a broad range of expertise, reflecting the broad scope of the journal. Editorial Board Members play an active role in the development and operation of the journal, including handling manuscripts submitted to the journal, promoting the journal within their respective networks, and suggesting topics for and guest-editing Topical Collections. *Discover Imaging* is also actively recruiting members to join the Editorial Board and be instrumental in the journal's growth.

1.3 Invitation to contribute

At *Discover Imaging*, we are committed to sustainable development, and as such welcome papers that address the United Nations Sustainable Development Goals.

Discover Imaging welcomes various article types, including full-length research articles as well as brief communications, comprehensive reviews, perspectives, and case studies. Please refer to the for a detailed list of the article types accepted by the journal, including instructions on manuscript preparation, formatting, length, and submission procedures.

We also publish guest edited Topical Collections focused on specialised hot topics relevant to all aspects of imaging research.

Diversity, inclusivity, and open research are at the heart of our journal's ethos. By creating a trusted inclusive and diverse space, we hope to build a home for innovations and advancements in imaging research from researchers across all regions, backgrounds, and areas of expertise. Open research fosters collaboration and the transparent dissemination of scientific advancements. We invite prospective authors to join us in this exciting endeavour by submitting articles covering all aspects of imaging from all fields of research.

Author contributions Writing—original draft, FPC, CV, and AE; Writing—review and editing, FPC, CV, and AE.

Data availability Not applicable.

Declarations

Competing interests The authors declare that they have no competing interests.