Special Issue

Precision Actuators for Optical Imaging and Light Beam Pointing

Message from the Guest Editors

Precision actuators, such as fast-steering mirrors and micro-scanning lenses that can realize multi-degree-of-freedom linear and rotational motion, are widely used in aerospace high-resolution optical imaging, free-space optical communication, and other acquisition, pointing, and tracking (ATP) systems. These actuators are mainly driven by a voice coil motor, hybrid reluctance motor, and piezoelectric stack, with compliant mechanisms functioning as motion-guiding support components, and with sensors like capacitors, inductors, Hall effect, etc., functioning as motion measurement components. They have the characteristics of integrated structure, sensing, and driving. How to achieve multi-degree-of-freedom, large-stroke, high-precision, high-dynamics, and environmental adaptability performance is the main technical challenge faced in designing such precision actuators. This Special Issue welcomes you to submit research papers on precision actuators for optical imaging and light beam pointing. Original work highlighting the latest research and technical developments relating to these topics is particularly encouraged, and review papers and comparative studies are also welcome.

Guest Editors

Prof. Dr. Dapeng Fan

College of Intelligence Science and Technology, National University of Defense Technology, Changsha 410073, China

Dr. Guangbo Hao

School of Engineering-Electrical and Electronic Engineering, University College Cork (Former Queen's College, Cork), Cork, Ireland

Deadline for manuscript submissions

20 August 2025

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/229950

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

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)