



an Open Access Journal by MDPI

# 3D/4D Printing in Advanced Robotics Systems

Guest Editors:

Dr. Tomasz Kozior tkozior@tu.kielce.pl

Assoc. Prof. Slawomir Blasiak sblasiak@tu.kielce.pl

Assoc. Prof. Jerzy Bochnia jbochnia@tu.kielce.pl

Assoc. Prof. Jakub Takosoglu qba@tu.kielce.pl

Deadline for manuscript submissions: **28 February 2021** 



### Message from the Guest Editors

Additive manufacturing technologies also known as 3D printing have evolved over the past 30 years, as evidenced by the strong development of 4D printing and modern innovative construction materials. This is particularly true for prototype production such as the production of industrial robots and robots for special applications. Dimensional accuracy as well as mechanical and tribological properties of models manufactured with 3D printing are already accurate to the point where it is possibile to manufacture fully functional parts of machines and robots.

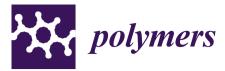
The Special Issue aims to investigate the analysis of the use of 3D/4D printing for the production of ready-made robot components, including prototype and mass production, using materials based on both plastics, ceramics and metal powders.

An important sub-topic is simulation research results of geometrically complex models manufactured using 3D/4D printing, in particular those that are impossible to produce with other conventional technologies.

Additionally the topic also concerns the study of mechanical properties, dimensional and shape accuracy with an emphasis on surface quality, as well as tribological properties of models produced by 3D printing technologies, including practical aspects of research on the use of 3D/4D printing technology in the production of real construction elements of industrial robots.

Finally, we are interested in the results of research on the reduction of model construction time and the consumption of model and support material through optimization using 4D printing. Also of interest are the results of research on properties of 3D/4D models produced in applications for industrial robots other than those aforementioned.







an Open Access Journal by MDPI

# **Editor-in-Chief**

#### Prof. Dr. Alexander Böker

Lehrstuhl für Polymermaterialien und Polymertechnologien Universität Potsdam, Germany

# Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and highquality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 3.164. I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

# **Author Benefits**

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

**High Visibility:** indexed by the Science Citation Index Expanded (Web of Science), Scopus (2019 CiteScore: 3.7), citations available in PubMed, full-text archived in PubMed Central, and other databases.

**Rapid Publication:** manuscripts are peer-reviewed and a first decision provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2019).

# **Contact Us**

*Polymers* MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 Fax: +41 61 302 89 18 www.mdpi.com mdpi.com/journal/polymers polymers@mdpi.com ♥@Polymers MDPI