

# Special Issue on Advanced Material Driven Design of Machine Tools

**Editors:**

**Prof. Dr. Konrad Wegener, IWF ETH Zürich, Switzerland**

**Prof. Dr. Atsushi Matsubara, Kyoto University, Japan**

The design of machine tools strongly depends on the materials chosen. Increasing demands placed on machine tools require the joint optimization of materials and design, which in turn drives the development of new materials in the field. Digital technologies finally creating a digital shadow of the machine in development also enable the co-development of materials and design with dynamic, thermal, and long-term influences and behaviors taking into consideration, and this co-development enables in turn state and health monitoring to increase the performance of the machine tool to its full potential. Meanwhile, newly developed concepts in materials, including metamaterials with previously unknown and unexploited properties, become available for application.

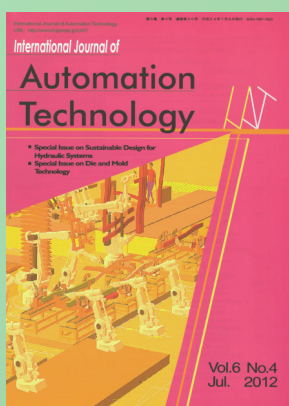
This special issue focusing on the design of machine tools and machine tool elements driven by advanced materials invites papers in the following areas:

- Applications of polymer-based materials, composite materials (e.g., fiber reinforced materials), ceramics, porous materials, biological materials, etc.
- Metamaterial design and application
- CAE-based design and methodological design
- Topology optimization
- Manufacturing technology
- Evaluation methods for elements and machines
- Design technologies for lightweight, high-stiffness, high-damping, thermally-stable structures
- New structural and /or functional materials
- Structure- and material-related state and health monitoring
- Material behavior in typical machine tool applications
- Integration of functionalities
- Effects of additive manufacturing

**\*Speedy Review (1-2months for the first review)**

**\*IJAT is indexed in Scopus; Compendex (Ei-Index)**

\*日本語でも投稿できます（採録後、翻訳され英文で出版されます）  
英文投稿の場合は採録後に無料で英文校閲を行います。



## Pages and important deadlines:

Number of pages: **8 pages (but no limit) / 8,000 words**  
Manuscripts should be in IJAT formats of Microsoft Word, TeX.

Submission Deadline: **July 28, 2019**

Publication: **March 5, 2020 (Vol.14 No.2)**

Submit your papers to: [\[online submission site\]](#)

<http://mc.manuscriptcentral.com/ijat>

For details on submission, go to: <https://www.fujipress.jp/ijat/au-authors/>

\*Paper is to be evaluated by two reviewers, then submitted to the IJAT Editing Committee for final selection. Reviews take about three weeks from paper receipt until notification of first review results.

\*A page charge (publication fee) is required for publication. For fees and prices, please see price list for page charge and reprints. Please see details on URL: [https://www.fujipress.jp/ijat/au-authors/#page\\_charge](https://www.fujipress.jp/ijat/au-authors/#page_charge)

\*It is highly recommended referring to related IJAT papers in your making manuscript.

You can download full-texts of all IJAT publications for free (open access) in <https://www.fujipress.jp/ijat/au/>

For details on the journal, go to: <https://www.fujipress.jp/ijat/>

[https://www.fujipress.jp/main/wp-content/themes/Fujipress/IJAT/pdf/IJATdocuments\\_eg.pdf](https://www.fujipress.jp/main/wp-content/themes/Fujipress/IJAT/pdf/IJATdocuments_eg.pdf)

<https://www.fujipress.jp/main/wp-content/themes/Fujipress/IJAT/pdf/IJATdocuments.pdf> (in Japanese)

Publisher: **Fuji Technology Press Ltd.** Inquiry: [auto@fujipress.jp](mailto:auto@fujipress.jp)



Unizo Uchikanda 1-Chome Bldg. 2F, 1-15-7 Uchikanda, Chiyoda-ku, Tokyo 101-0047, Japan  
Phone: +81-3-5577-3851 / Fax: +81-3-5577-3861

URL: <https://www.fujipress.jp/ijat/>

This title is  
now indexed  
in Scopus

refine your research  
**SCOPUS**