

- ➔ Note the specified character limit (including spaces) of approx. **16,000 characters** plus **3–5 images** (approx. one image per page). The character limit includes the entire text **between** the contact information and the teaser.
- ➔ Place the text in the **order** shown below and with the corresponding elements.
- ➔ Do not insert any **figures** into the manuscript text, organize them in a separate file instead. Figures must be provided in an **editable format**, e.g. as a PowerPoint or Excel file. Replace screenshots with editable files wherever you can.
- ➔ **Left-align** all text except for the title section. Adjust **line spacing** to 1pt, and **do not** use paragraph spacing. **Avoid** additional formatting. **Disable hyphenation**.
- ➔ List **references** in chronological order, i.e. starting with [1]. References must be formatted as indicated, and should be avoided in the abstract. Do **not** use footnotes.
- ➔ Use the **m-dash “—” without spaces before and after** to mark out a parenthesis or a break.
- ➔ Use **typographic quotation** marks (“...”); do not use neutral quotation marks (“...”).
- ➔ **Avoid** direct quotes and bullet points. Use **bold** and *italic* fonts sparingly in the body copy.

## Further Training in Industry 4.0 with AI Tutoring Systems

*State of Technology* .....

Norbert Gronau and Georg David Ritterbusch, University of Potsdam .....

Title (max. 60 characters)

Subtitle (max. 90 characters)

Author1, Author2 and Author3,  
Name of Institution

### Authors

Prof. Norbert Gronau holds the Chair of Information Systems, Processes .....  
and Systems. His research interests include Industry 4.0, knowledge  
management, and business processes as well as the adaptability of socio-  
technical systems.

Georg David Ritterbusch, MS is a Research Associate at the Chair of  
Information Systems, esp. Processes and Systems, at the University of  
Potsdam. His research focuses on extended reality (VR/MR/AR), metaverse,  
and human-AI interaction.

Short author bio, including  
status/title and **current**  
positions.

**Dr.** and **Prof.** appear before a  
person’s name, other titles  
such as **MS**, **BS** or **MBA** come  
after.

**Contact** .....  
ritterbusch@lswi.de  
lswi.de/?lang=en

**One** contact email and website  
is sufficient. Web pages should  
be in **English**, if available.  
Do **not** include https://.

**The rapid development of artificial intelligence (AI) is constantly opening .....  
up new opportunities, particularly in factory training. For employees, this  
not only means a significant advantage in the actual manufacturing process,  
but also in the field of continuing education. This paper provides an  
overview of AI tutoring systems continuing education in the context of  
Industry 4.0 by presenting a categorization that discusses different  
approaches of AI tutoring systems by learning methods, application areas  
and their respective technologies. In addition, an outlook on the disruptive  
effect of generative AI on AI tutoring systems in Industry 4.0 is given.**

Abstract (max. 120 words)

The commercialization of generative artificial intelligence (generative AI) through systems such as OpenAI's ChatGPT has introduced a new generation of AI for use in all areas of life, but also in industry [1, 2].

Main body (12pt), including references. More than three consecutive references are combined (e.g. [1–4]).

...<TEXT>...

*Figure 1: Teaching and learning in the digital environment—model of the components and their interdependencies.*

Caption. All images, tables, photos, graphics, etc. are referred to as “Figure”.

## **Categorization of Artificial Intelligence Tutoring Systems**

Primary subheading (14pt)

Artificial Intelligence Tutoring Systems (AITS) in Industry 4.0 can be differentiated using various perspectives (**Fig. 1**). On one hand, AITS can be distinguished in terms of the addressed learning approaches [19]. On the other hand, and as **Figure 1** also illustrates, a classification in application, especially regarding company organization, might be beneficial [14, 20].

At first occurrence, abbreviations must be written out. Figure references in brackets are shortened. All figure references use **bold** font.

### **Learning approaches**

Secondary subheading (12pt)

One of the most important tasks of AITS is conveying learning content or supporting both teachers and learners in this process. Various learning approaches or methods can be used in education and training.

...<TEXT>...

*This contribution was made possible thanks to the ...*

Acknowledgements, if relevant.

## **Bibliography**

Name your references here in order of appearance:

- Do not use tables
- Do not use quotation marks
- Do not name publishers, only **locations**
- Journal articles must be provided with **Journal Volume (Year) Issue**
- **URLs** and **date of access** are required for online sources (**DOIs** do not require dates)
- Provide no more than 5 authors per source; use “et al.” for all following

References must be formatted as indicated, including correct punctuation. Non-compliance may lead to rejection before peer review.

- [1] Javaid, M.; Haleem, A.; Singh, R. P.: A study on ChatGPT for Industry 4.0: Background, potentials, challenges, and eventualities. In: **Journal of Economy and Technology 1 (2023) 3**, pp. 127–143. DOI: <https://doi.org/10.1016/j.ject.2023.08.001>.
- [2] Gonnermann, J.; Brandenburger, B.; Vladova, G.; Gronau, N.: To What Extent Can Individualisation in Terms of Different Types of Mode Improve Learning Outcomes and Learner Satisfaction? A Pre-study. Hawaii International Conference on System Sciences 2023 (HICSS-56) (2023) 14. URL: [https://aisel.aisnet.org/hicss-56/cl/teaching\\_and\\_learning\\_technologies/14](https://aisel.aisnet.org/hicss-56/cl/teaching_and_learning_technologies/14), accessed 15.06.2024.
- [3] Kapp, K. M.: The gamification of learning and instruction: Game-based methods and strategies for training and education. **New York, NY** 2012.
- [4] eit manufacturing: Learning Factories Networks. European Institute of Innovation and Technology. URL: <https://www.eitmanufacturing.eu/what-we-do/education/resources/learning-factory%E2%80%8B/>, accessed 15.06.2024.

**Keywords:** .....  
intelligent tutoring systems, ITS, Education 4.0, artificial intelligence, Industry 4.0, adaptive learning, personalized learning

List 8–10 keywords

**Teaser**

The commercialization of generative artificial intelligence (AI) through ..... systems such as ChatGPT has ushered in a new era of Industry 4.0. The automatic creation of new content with generative AI is particularly important for the development of AI-based tutoring systems (AITS) that promote digital learning in the context of Education 4.0. However, these systems must first be categorized according to learning methods and their areas of application before they can be successfully implemented.

Provide a jargon-free introduction to your topic that makes readers curious about your approach (approx. 500 characters).