

2025 IEEE 4th German Education Conference (GECon 2025)

**Hamburg, Germany
21-23 July 2025**

IEEE Catalog Number:
ISBN:

CFP25CK3-POD
979-8-3315-0136-5



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP25CK3-POD
ISBN (Print-On-Demand):	979-8-3315-0136-5
ISBN (Online):	979-8-3315-0135-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Let's Chat about This - A Template for Well-Aligned AI Integration in Schools	1
<i>Simon Martin, Anna-Marie Lauber, Barbara Pampel</i>	
Student Workshop on Scientific Writing – A Practical Approach to Workshop Design	8
<i>Carsten Thomas Gatermann, Hannes Grüsung, Nadja Isabelle Belz, Jenny Gramsch, Claudia Haaßengier Dirk Westermann</i>	
Strategies for Supporting Students on their Transition from School to Higher Education in a STEM Program	14
<i>Sabine Hammer, Axel Bottcher, Veronika Thurner</i>	
Status quo and challenges of professional Systems Engineering education in industrial practice	20
<i>Ulf Könemann, Marcel Niemeyer, Anja Schierbaum, Roman Dumitrescu</i>	
Empowering Futures: Evaluation of a STEM Orientation Programme for Young Women	26
<i>Marie Gillian Guerne, Brit-Maren Block</i>	
Using Large Language Models to Create a Universal Framework for Secure Exam Generation	32
<i>Dina Reda El-Damak, Wassim Alexan</i>	
Is it worth the effort? Relating course intensity to students' innovation capacities through project outcomes	38
<i>Clara Drees, Kirstin Kohler, Manuel Walter</i>	
Gameful Learning as a Safe Haven: Embracing Diversity in Student-Centered Education	44
<i>Amir Madany Mamlouk, Dominik Mairhoefer</i>	
A Do-It-Yourself Single-Board-Computer Cluster Used for Teaching High-Performance-Computing	50
<i>Niklas Schlegel, Silas Della Contrada, Lukas Lange, Marcus Soll, Louis Kobras, Daniel Versick, Jan Haase</i>	
Project-based Learning in EMC: Capacitive Coupling	56
<i>Jens Werner, Alexandra Burger, Sebastian Koj</i>	
How Soft Skills Shape First-Year Success in Higher Education	62
<i>Kerstin Andree, Santiago Berrezueta-Guzman, Stephan Krusche, Luise Pufahl, Stefan Wagner</i>	
Project-Based Hardware Design Laboratory for Undergraduates in Electrical Engineering	69
<i>Christian Karle, Iris Fuerst-Walter, Florian Schade, Julian Hoefer, Fabian Lesniak, Tanja Harbaum Juergen Becker</i>	
Work in Progress: Design education in additive manufacturing using scaled wind turbines models	74
<i>Stefan Junk</i>	
Metaverse in Civil Engineering : Insights from an application for students	79
<i>Niels Bartels, Arnulph Fuhrmann, Ruth Kasper, Pietro Di Biase, Kristina Hahne</i>	
Quo Vadis, Laboratorium — (Non-)Pervasiveness of Cross-Reality Laboratories in German Educational Research	85
<i>Marcus Soll, Louis Kobras</i>	
Enhancing Engineering Education through a Remote High-Voltage Laboratory Solution	93
<i>Sindi Veliko, Jandrik Skeide, Johannes Friedrichs, Matthias Haupt, Alexandra Burger, Sebastian Azer</i>	

Enhancing Digital Technology Education through MICRO: FPGA-Based Remote Experiments with Simulation-Driven Feedback	98
<i>Jakob Czekansky, Justin Sauer, Diethelm Bienhaus</i>	