

Publikationsliste

Auswahl (Stand Dez. 2025)

2025

Herbst, L.; Spatz, V. (2025, August 25-29): **How physics teachers think about science – Physics teachers' views of science compared to researchers** [Paper presentation]. ESERA 2025 Conference, Transitions in Science Education: Sustainability and Digital Advances, Kopenhagen, Dänemark → [contribution to the conference proceedings in preparation](#)

Goldhorn, L.; Wilhelm, T.; Spatz, V. (2025, August 25-29): **How Students' Understanding of Intelligence Influences their Theories of Intelligence** [Paper presentation]. ESERA 2025 Conference, Transitions in Science Education: Sustainability and Digital Advances, Kopenhagen, Dänemark → [contribution to the conference proceedings in preparation](#)

Weiss, B.; Spatz, V.; Gräfe, M.; Küchenmeister, J. (2025, August 25-29): **Experiment for students on quantum imaging with undetected light** [Poster presentation]. ESERA 2025 Conference, Transitions in Science Education: Sustainability and Digital Advances, Kopenhagen, Dänemark → [contribution to the conference proceedings in preparation](#)

Steinmetz, T.; Burde, J.P.; Schubatzky, T.; Spatz, V.; Hopf, M.; Haagen-Schützenhöfer, C.; Ivanjek, L.; Gottschlich, B.; Wilhelm, T. (2025, March 23-26): **Teaching Circuits Using the EPo Concept: Impact on Conceptual Understanding in Middle Schools** [Poster presentation]. NARST 2025 Annual International Conference, Oxon Hill, Maryland, Vereinigte Staaten

Diederich, M.; Spatz, V. (2025, Januar 27-29): **Die Rolle impliziter Fähigkeitstheorien in der MINT-Studieneingangsphase: Deskriptive Analysen und Beeinflussung durch eine Online-Intervention** [Paper presentation]. GEBF 2025 Haupttagung, Bildung als Schlüssel für gesellschaftliche Herausforderungen, Mannheim, Deutschland

2024

Biedenbach, J.; Spatz, V. (2024): **Using the Design-Based Research Approach to Develop and Evaluate a New Study Module about Knowledge Acquisition in Science**, Journal of Physics: Conference Series 2727 012007, DOI 10.1088/1742-6596/2727/1/012007

Gottschlich, B.; Burde, J.P.; Wilhelm, T.; Dopatka, L.; Spatz, V.; Schubatzky, T.; Haagen-Schützenhöfer, C.; Ivanjek, L.; Hopf, M. (2024): **A Context-based Teaching Concept on Electric Circuits - Development and First Results**, Journal of Physics: Conference Series 2750 012010, DOI 10.1088/1742-6596/2750/1/012010

Kriegel, M.; Spatz, V. (2024): **Development of a RIASEC-based model to analyse students' perceptions of the work of nuclear- and astrophysicists**, Journal of Physics: Conference Series 2750 012034, DOI 10.1088/1742-6596/2750/1/012034

Schmitt, K.; Spatz, V. (2024): **Assessing the prior knowledge of students in physics minors**, Journal of Physics: Conference Series 2750 012047, DOI 10.1088/1742-6596/2750/1/012047

Diederich, M.; Spatz, V. (2024). **The Role of Domain-Specific Growth Mindset (Implicit Theories) at the Beginning of STEM University Studies: Comparing New and Old Measures**. In: Faletić, S., Pavlin, J. (eds) Teaching and Learning Physics Effectively in Challenging Times. Challenges in Physics Education. Springer, Cham. https://doi.org/10.1007/978-3-031-72541-8_8

Diederich, M.; Rehberg, J.; Spatz, V.; Wilhelm, T. (2024): **Navigating the STEM University Transition: Effects of a combined Mindset and Learning Strategy Online Intervention**. In: Metin Sardag, Gokhan Kaya, Mehmet Sogut (Eds.). Proceedings Book Series– I of the ESERA 2023 Conference. Connecting Science Education with Cultural Heritage, (pp. 620-633). Cappadocia, Türkiye. Nobel Bilimser Eserler.

Schmitt, K.; Spatz, V. (2024): **Prior Knowledge in Physics: The Distribution within different subgroups of students before attending physics minors**. In: Metin Sardag, Gokhan Kaya, Mehmet Sogut (Eds.). Proceedings Book Series– I of the ESERA 2023 Conference. Connecting Science Education with Cultural Heritage, (pp. 430-439). Cappadocia, Türkiye. Nobel Bilimser Eserler.

2023

Goldhorn, L.; Wilhelm, T.; Spatz, V. (2023): **Growth Mindset In Physics: Students' Beliefs About Learning Physics in Middle School And How To Foster A Subject Specific Growth Mindset**, International Journal of Innovation in Science and Mathematics Education, Vol 31 No 4, <https://doi.org/10.30722/IJISME.31.04.002>

2022

Biedenbach, J.; Spatz, V. (2022): **Konzeption einer integrierten naturwissenschaftlichen Veranstaltung als Teil eines interdisziplinären Vernetzungsbereichs**, heiEDUCATION-Journal, Transdisziplinäre Studien zur Lehrerbildung, DOI: <https://doi.org/10.17885/heiup.heied.2022.8>

Biedenbach, J.; Spatz, V. (2022): **Integrating Inquiry Based Learning in Physics Teacher Education through a Seminar about Processes of Gaining Knowledge in Science**, Journal of Physics: Conference Series 2297 012027, DOI 10.1088/1742-6596/2297/1/012027

Goldhorn, L.; Wilhelm, T.; Spatz, V. (2022). **Domain-specific theories of intelligence: how students' mindsets in physics change without interventions**. In G.S. Carvalho, A.S. Afonso & Z. Anastácio (Eds.), Fostering scientific citizenship in an uncertain world (Proceedings of ESERA 2021), pp. 161-167. Braga: CIEC, University of Minho. ISBN 978-972-8952-82-2

2021

Spatz, V.; Goldhorn, L. (2021): **When it's more difficult, I just cram more! – An Exploratory Interview Study on Students' Mindsets in Physics**, European Journal of Science and Mathematics Education, Vol. 9, No. 3, 92-109

Ivanjek, L.; Morris, L.; Schubatzky, T.; Hopf, M.; Burde, J.-P.; Haagen-Schützenhöfer, C.; Dopatka, L.; Spatz, V.; Wilhelm, T. (2021): **Development of a two-tier instrument on simple electric circuits**, Physical Review Physics Education Research, Vol. 17, No. 2, 1-15

Dopatka, L.; Spatz, V.; Haagen-Schützenhöfer, C.; Schubatzky, T.; Burde, J.-P.; Wilhelm, T.; Ivanjek, L.; Hopf, M. (2021): **Kontextstrukturierte Unterrichtsmaterialien zur Elektrizitätslehre**, MNU Journal, Vol. 74, Nr. 1, 11-14

Spatz, V.; Ungermann, M. (2021, Januar 9-12): **A STEAM approach towards scientific inquiry**, [Paper presentation, invited]. AAPT Virtual Winter Meeting, online

2020

Spatz, V.; Hopf, M.; Wilhelm, T.; Waltner, C.; Wiesner, H. (2020): **Two-dimensional dynamics-The effects of a newly developed content structure on German middle school students**, European Journal of Science and Mathematics Education, Vol. 8, No. 2, 76-91

Schubatzky, T.; Haagen-Schützenhöfer, C.; Burde, J.-P.; Wilhelm, T.; Ivanjek, L.; Hopf, M.; Dopatka, L.; Spatz, V. (2020). **Orientation to Teaching Introductory Electricity - Aims and Motives of Teachers**. In Levrini, O. & Tasquier, G. (Eds.), Electronic Proceedings of the ESERA 2019 Conference. The beauty and pleasure of understanding: engaging with contemporary challenges through science education, Part 14 (co-ed. Fazio, C. & Welzel-Breuer, M.), (pp. 1678-1687). Bologna: ALMA MATER STUDIORUM – University of Bologna. 978-88-945874-0-1978-88-945874-0-1

Burde, J.-P.; Wilhelm, T.; Hopf, M.; Ivanjek, L.; Schubatzky, T.; Haagen-Schützenhöfer, C.; Dopatka, L.; Spatz, V. (2020): **Evaluating secondary school students' interest and conceptual understanding of circuits**, Physics Education Research Conference Proceedings, pp. 69-74, doi:10.1119/perc.2020.pr.Burde

Dopatka, L.; Spatz, V.; Burde, J.-P.; Wilhelm, T.; Ivanjek, L.; Hopf, M.; Schubatzky, T.; Haagen-Schützenhöfer, C. (2020): **Measuring students' interest in physics**, Physics Education Research Conference Proceedings, pp. 111-116, doi:10.1119/perc.2020.pr.Dopatka

Ungermann, M.; Spatz, V. (2020, July 19-22): **Development of high school students' understandings of Nature of Science** [Poster presentation]. AAPT Virtual Summer Meeting, online

Dopatka, L.; Spatz, V.; Burde, J.-P.; Wilhelm, T.; Schubatzky, T.; Haagen-Schützenhöfer, C.; Ivanjek, L.; Hopf, M. (2020, July 19-22): **Evaluating context-oriented teaching materials for electricity lessons** [Poster presentation]. AAPT Virtual Summer Meeting, online

Burde, J.-P.; Wilhelm, T.; Schubatzky, T.; Haagen-Schützenhöfer, C.; Ivanjek, L.; Hopf, M.; Dopatka, L.; Spatz, V. (2020, July 19-22): **Boys' and girls' interest in and conceptual understanding of simple circuits** [Paper presentation]. AAPT Virtual Summer Meeting, online

2019

Spatz, V.; Wilhelm, T.; Hopf, M.; Waltner, C.; Wiesner, H. (2019): **Teachers Using a Novel Curriculum on an Introduction to Newtonian Mechanics: The Effects of a Short-Term Professional Development Program**, Journal of Science Teacher Education, DOI: 10.1080/1046560X.2018.1542232

Spatz, V.; Tampe, J.; Slezak, C. (2019): **Fostering Students' Decision-making Competencies**, The Physics Teacher, DOI: 10.1119/1.513111

Haagen-Schützenhöfer, C.; Burde, J.-P.; Hopf, M.; Spatz, V.; Wilhelm, T. (2019): **Using the electron-gas-model in lower secondary schools – a binational design-based research project**, In: McLoughlin, E.; Kampen, P. (Eds.): Concepts, Strategies and Models to Enhance Physics Teaching and Learning, Springer Nature Switzerland, 3-12

Spatz, V.; Slezak, C.; Tampe, J. (2019): **A teaching unit on electric vehicles to foster students' decision-making competencies**, Journal of Physics: Conference Series, DOI: 10.1088/1742-6596/1286/1/012001

2018

Spatz, V.; Hopf, M.; Wilhelm, T.; Waltner, C.; Wiesner, H. (2018): **Eine Einführung in die Mechanik über die zweidimensionale Dynamik**, Zeitschrift für die Didaktik der Naturwissenschaften, DOI: 10.1007/s40573-018-0074-y

Begutachtungen

Tätigkeit als Gutachterin:

DFG (Deutsche Forschungsgemeinschaft)

GIREP (Group International de Recherche sur l'Enseignement de la Physique)

PERC (Physics Education Research Conference, AAPT)

TPT (The Physics Teacher, AAPT)

International Journal of Science Education

International Journal of Innovation in Science and Mathematics Education

European Journal of Science and Mathematics Education

Eurasia Journal of Mathematics, Science and Technology Education

Hessische Lehrkräfteakademie bzw. Hessisches Kultusministerium

Bayerisches Staatsministerium für Wissenschaft und Kunst