Curriculum Vitae

Personal Information

Date of Birth	June 27, 1990
Nationality	German
E-Mail	jkahlbow@mit.edu
Webpage	jkahlbow.mit.edu

Awards

2019 **Giersch Excellence Award**.
For outstanding Doctoral Thesis.

2018 **Travel Prize of the Collaborative Research Center 1245**.
Best publication of experimental work: J. Kahlbow et al., *Neutron radioactivity – Lifetime measurements of neutron-unbound states*, NIM A 866 (2017).

Young Scientist Poster Prize at GSI-FAIR.
"Physics with R^3B-NeuLAND at RIBF/RIKEN"

Career History

Post-doctoral Researcher.

Jan 2020 – present: Massachusetts Institute of Technology (Laboratory for Nuclear Science), USA.
PI: Prof. Or Hen

Sep 2019 – Sep 2022: Tel-Aviv University (School of Physics and Astronomy), Israel.
PI: Prof. Eli Piasetzky

PhD Researcher.

May 2015 – Aug 2019: Technische Universität Darmstadt (Institute for Nuclear Physics), Germany,
Thesis: *'with distinction'*.
"The low-Z Shore of the Island of Inversion: Invariant-mass Spectroscopy of the heavy Fluorine Isotopes ^{29}F* & ^{30}F at SAMURAI with NeuLAND"
Supervisor: Prof. Dr. Thomas Aumann

Aug 2018: FGIP Associate at Tokyo Institute of Technology (Japan)
Host: Prof. T. Nakamura, Physics Department

Oct 2015 – April 2016: International Program Associate at RIKEN Nishina Center (Tokyo, Japan)
Host: Dr. T. Uesaka, Spin-Isospin Laboratory

Academic Qualification

2012 – 2015 **Master of Science Studies in Physics**, *TU Darmstadt*.
Specialized in Structure of strongly-interacting matter and nuclear astrophysics.
Thesis: "One-Neutron Removal Reactions on ^{11}Be & ^{12}Be"
Supervisor: Prof. Dr. Thomas Aumann

2009 – 2012 **Bachelor of Science Studies in Physics**, *TU Darmstadt*.
Thesis: "Data Acquisition for the low-energy Photon Tagger NEPTUN"
Supervisor: Priv.-Doz. Dr. Heiko Scheit

2001 – 2009 **High School**, *Marie-Curie-Gymnasium*, Wittenberge, Germany,
Abitur 'with distinction'.

Trainings and Work Experience

Workshop Co-organizer.
EMC-SRC Workshop, MIT 2021.
4th International SRC-EMC Workshop, CEA Saclay 2023.
Symposium "Spectroscopy of Rare Isotopes with Quasi-Free Scattering", York 2023.

Journal Referee.
Nature, Nature Physics, Physics Letters B, Communications Physics

Review Editor.
Frontiers in Physics (Nuclear Physics)

HGS-HIRe Softskills Courses.
Course I: "Making an Impact as an Effective Researcher"
Course II: "Leading Teams in a Research Environment"
Course III: "Leadership and Career Development"

Student Assistant, *TU Darmstadt*.
Neutron detector mounting for R^{3}B experiment at GSI-FAIR.
Maintenance of the data acquisition for the Photon Tagger NEPTUN.

Teaching Experience and Mentoring

Supervising Students.
1 Master course student at TUDa,
2 Graduate students at MIT,
2 Undergraduate, 2 graduate students at TAU,
3 Graduate students at JINR.

Exercise and Lecture Coordinator, *TU Darmstadt*.
Summer Term 2017: "Physics II for Electrical Engineers"
Winter Term 2016: "Physics I for Electrical Engineers"
Summer Term 2016: "Measurement Techniques in Nuclear Physics"

Seminar Tutor, *TU Darmstadt*.
Summer Terms 2015 & 16: Seminar "Nuclear Structure and Astrophysics"

Journal Club Organizer, *LNS (MIT)*.
2023 & 24: Informal Journal Club for Nuclear and Hadronic Physics Groups

Memberships

Member of the German Physical Society (DPG).

Member of the American Physical Society (APS).

Member of the R^{3}B Collaboration.
Experiment Collaboration for "Reactions with Relativistic Radioactive Beams" at GSI-FAIR

Member of the BM@N Collaboration.
Experiment Collaboration at the Joint Institute for Nuclear Research (JINR, Russia)

2015 – 2019 **Participant Helmholtz Graduate School for Hadron and Ion Research (HGS-HIRe)**.

2016 – 2019 **Participant Collaborative Research Center 1245**.
at the Institute for Nuclear Physics (TU Darmstadt):
"Nuclei: From Fundamental Interactions to Structure and Stars".

Research Experience

Data analysis.
Performing and leading the data analysis and simulation work of kinematically-complete experiments with radioactive beams and in SRC physics, as well as fixed-target electron scattering.

Leading an experiment.
Leading the SRC experiment at JINR in 2022.
Study of the neutron-decay lifetime of the ^{26}O(g.s.) at SAMURAI setup (RIBF).

Detector work.
Working-group member for the NeuLAND neutron detector at GSI-FAIR. Developing new proton-pion ToF-Calorimeter detector for JINR.

Participation in several experiments at SAMURAI (RIBF), R^{3}B (GSI-FAIR), BM@N (JINR).
Studying nuclear structure and SRCs.

Research Interests

Nuclear structure and spectroscopy at and beyond the neutron drip-line.

Short-Range Correlations in nuclei.

New phenomena in neutron-rich nuclei.

Nuclear astrophysics.

Quasi-free scattering reaction mechanism (in inverse kinematics).

Neutron-detection systems.