Priv. Doz. Dr. Sven Sturm

Curriculum Vitae

Priv. Doz. Dr. Sven Sturm
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Vita

16.06.1981 born in Koblenz

2000 Abitur at the Hilda-Gymnasium Koblenz

2000 – 2001 civilian service

Married, 3 children

University study and PhD

2001 – 2007	Physics study, Ruprecht Karl University of Heidelberg
2004	Physics PreDiploma – magna cum laude
2005 – 2007	Research stay as „Technical Student“ at CERN
2007	Diploma thesis in experimental physics (Prof. Dr. A. Wolf): '*Implementation of a mass separation method in the Penning trap REXTRAP and investigation of space-charge related phenomena*'
2006	Physics Diploma – magna cum laude
2007 – 2010	Research Assistant, Institute of Physics, Johannes Gutenberg-University Mainz
June 2007 – April 2012	Dissertation in experimental physics (Prof. Dr. K. Blaum): '*The g-factor of the electron bound in $^{28}Si^{13+}$: the most stringent test of bound-state quantum electrodynamics*'
April 2012	Doctor rerum naturalium in Physics – summa cum laude

PostDoc and habilitation

2012 – 2016	Project Leader "g-Faktor Experiment für hochgeladene Ionen" at Johannes Gutenberg-University Mainz
2012 – 2019	Postdoctoral Research Associate (Working Group of Prof. K. Blaum) at MPIK Heidelberg
Since 2013	Group Leader ALPHATRAP Experiment at MPIK, Heidelberg
09.02.2022	Habilitation in experimental physics at the Ruprecht Karl University of Heidelberg (Mentor Prof. Dr. K. Blaum)

Teaching and Tasks

Since 2017	Lecturer in International Max Planck Research School for Quantum Dynamics (IMPRS-QD)
Since 2017	Member of Collaborative Research Center IsoQuant (SFB1225)
Since 2020	Principal Investigator (PI) in Collaborative Research Center IsoQuant (SFB1225)
Since 2021	Ombudsperson of Science at MPIK Heidelberg

Courses

2012	Lecture “Precision experiments with trapped ions”, Ruprecht Karl University of Heidelberg
2014	Lecture “Stored Charged Particles”, Ruprecht Karl University of Heidelberg
2015	Lecture “Precision experiments with trapped ions”, Heidelberg graduate school for physics (HGSFP)
2015/16	Lecture “Stored Charged Particles”, Ruprecht Karl University of Heidelberg
2017	Lecture “Stored Charged Particles”, Ruprecht Karl University of Heidelberg
2021	Tutorial group “PEP4”, Ruprecht Karl University of Heidelberg
2022	Tutorial group “PEP4”, Ruprecht Karl University of Heidelberg

Collaborations and Memberships

TCFS (Time, Constants and Fundamental Symmetries) Center (Max-Planck/RIKEN/ PTB)
SPARC (GSI)
HITRAP/FAIR (GSI)
Deutsche Physikalische Gesellschaft, Deutsche Gesellschaft für Massenspektrometrie, European Physical Society, American Physical Society

Referee

Journals (selection)	Nature, Physical Review and Physical Review Letters, Physical Review A, European Physical Journal A & D, Journal of Physics B

National Science Foundation (NSF)

Schweizerischer Nationalfonds (SNF)

Invited talks (selection)

Since 2012 > 50 invited talks at seminars, colloquia and int. conferences:

- International symposium of EBIS/T (EBIST2014)
  "*The g-factor of Highly Charged Ions – Stress Test for the Standard Model and Access to the Atomic Mass of the Electron*"
  East Lansing, Michigan, USA, 21.05.2014
- International conference on Trapped Charged Particles and Fundamental Physics (TCP2014)
  "The g-factor of Highly Charged Ions – Stress Test for the Standard Model and Access to the Atomic Mass of the Electron"
  Takamatsu, Japan, 1.-5.12.2014
- Fachbeiratsbegutachtung MPIK, *"The mass of the electron via the g-factor of highly charged ions",* MPIK Heidelberg, 02.04.2014
- International workshop FAIRNESS2014
  "The g-factor of Highly Charged Ions - Stress Test for the Standard Model and Access to Fundamental constants"
  Vietri sul Mare, 25.09.2014
- European Conference on Trapped Ions (ECTI2014)
  "The g-factor of Highly Charged Ions - Stress Test for the Standard Model and Access to Fundamental constants"
  Mainz, 16.09.2014
- Heidelberg Graduate School for Fundamental Physics (HGSFP) Graduate Days "Precision experiments with trapped ions", Heidelberg, 03.02.2015
- Fachhochschule Mannheim *"Ein Leichtgewicht auf der Waage - wie wiegt man ein Elektron?"* Mannheim, 11.06.2015
- Workshop on Application of Lasers and Storage Devices in Atomic Nuclei Research (LASER2016)
  "*High-precision measurement of the isotope effect in the magnetic moment of highly charged ions and the ALPHATRAP experiment"*
  Poznan, Poland, 16.-19.05.2016
- Fachbeiratsbegutachtung MPIK, *"Precision measurements of fundamental constants",* MPIK Heidelberg, 05.04.2017
- Precision Physics, Quantum Electrodynamics and Fundamental Interactions
  "Testing strong field QED via the magnetic moment of highly charged ions"
  Cargese, France, 01.05.2017
- CPTS(MPG) Sektionsmeeting *"Precision measurements of the magnetic moment of highly charged ions and determination of fundamental constants",* Berlin, 26.10.2017
- International Conference on Precision Physics and Fundamental Physical Constants (FFK-2017) *"Testing strong field QED via the magnetic moment of highly charged ions"*
  Warsaw, Poland, 16.05.2017
- SFB ISOQUANT workshop, *"Precision physics in strong-field QED and limits on the time*

variation of fundamental constants (B01)", Heidelberg, 2018

- WE-Heraeus Seminar 2018, *"The magnetic moment of highly charged ions: Test of strong field QED and access to fundamental constants"*
  Bad Honnef, Germany, 17.05.2018
- International Symposium on Symmetries in Subatomic Physics (SSP2018), *"Stringent tests of bound-state QED using highly charged ions"*
  Aachen, Germany, 12.06.2018
- Gordon Atomic Physics conference (GRC), *"QED Tests in Strong Fields and Fundamental Constants from Precision Measurements on Highly Charged Ions"*
  Newport, Rhode Island, USA, 12.06.2019
- PSI2019 conference on precision physics at low energy, "*QED Tests in Strong Fields and Fundamental Constants from Precision Measurements on Highly Charged Ions*"
  PSI Villigen, Switzerland, 20.10.2019
- International Conference on Atomic, Molecular, Optical and Nano Physics with Applications (CAMNP2019), "*Stringent tests of bound-state QED using highly charged ions*"
  New Delhi, India, 18.-20.12.2019
- AVA school on precision studies 2020, "*Testing strong-field QED*"
  Prague, Czech Republic (virtual), 25.03.2020

Miscellaneous

Jul - Aug 2005	Research stay at CERN/Genf
2006 – 2007	Research stay at CERN/Genf
3 Dec 2009	Invention report: Power supply Utility patent no. 202008009497.6

Organisation of scientific meetings

2014	Local organising committee for European Conference on Trapped Ions (ECTI) / ~80 participants / Mainz, Germany
2017	Local organising committee for DPG SAMOP spring meeting / ~2000 participants / Mainz, Germany
2019	Organising committee QSEC2019 conference (SFB1225 IsoQuant)
2019	Organiser H_2^+ laser spectroscopy workshop / ~20 participants / MPIK Heidelberg, Germany