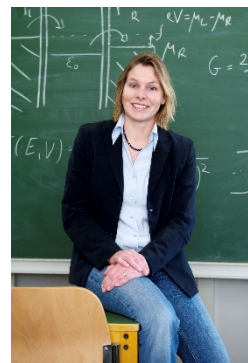


Prof. Dr. Elke Scheer

General information

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University training and degree

1984 – 1990 Physics, Universität Karlsruhe (KIT), Diploma, Prof. Dr. H. v. Löhneysen

Advanced academic qualifications

Doctorate Physics, Universität Karlsruhe (KIT), 1995, Prof. Dr. H. v. Löhneysen

Postgraduate professional career

2003 – 2009 Director of the Center for Junior Research Fellows (Zukunftskolleg) of Universität Konstanz
since 2000 Professor, Universität Konstanz
1997 – 2000 Assistant Professor (Wissenschaftliche Assistentin C1), Universität Karlsruhe (KIT)
1996 – 1997 Postdoctoral Researcher, Commissariat à l'Energie Atomique (CEA), Saclay, France, Dr. M. H. Devoret, Dr. D. Estève, Dr. C. Urbina

Other Activities

since 2021 Vice spokesperson of Low Temperature Physics division of the Deutsche Physikalische Gesellschaft (DPG)
since 2019 Member of the Scientific Advisory Council of Cluster of Excellence ML4Q
since 2018 Member of the Grant Committee for Collaborative Research Centers of the Deutsche Forschungsgemeinschaft (DFG)
2015 – 2020 Member of the Stern-Gerlach Prize Committee of the DPG
2015 – 2021 Member of the American Chemical Society (ACS)
2013 – 2017 Member of the Scientific Advisory Council of Forschungszentrum Jülich
2012 – 2018 Elected member of the Fachkollegium 307 (Condensed Matter Physics) of the DFG
2012 Tina-Ulmer-Lehrpreis an der Universität Konstanz
2012 – 2019 Coordinator of the IRTG Nano within the CRC 767 'Controlled Nanosystems'
since 2009 Elected member of the Heidelberger Akademie der Wissenschaften
2008 – 2011 Spokesperson of Collaborative Research Center CRC 767 'Controlled Nanosystems'
since 2006 Organization of the Wilhelm und Else Heraeus Seminars No. 769 (2022), No. 697 (2019), No. 628(2016), No. 545 (2013), No. 469 (2010), No. 420 (2008), No. 374 (2006) and several other conferences and workshops
2006 – 2009 Member of the Steering Committee for the Excellence Initiative of Universität Konstanz (Zukunftskonzepte)
2003 – 2012 Local coordinator and member of the executive committee of the research network 'Functional Nanostructures' of Baden-Württemberg
2002 – 2004 Member of the Walter Schottky Prize Committee of the DPG
2000 Alfred Krupp-Prize for Young Professors of the Krupp-Stiftung
1999 Gustav Hertz-Prize of the DPG
since 1996 Referee for more than 50 international funding organizations and journals
1997 Postdoctoral Fellowship of the French CIES
1996 – 1997 Research Fellowship of the DFG
since 1990 Member of the German Physical Society (DPG)
since 1999 about 150 invited talks at international conferences
since 1989 Author of >150 publications, > 4000 citations, h-index 36 (October 2021, Web of Science)

Selected publications

a) Publications in peer-reviewed scientific journals

1. Yang, M. Fu, B. Bosnjak, R. H. Blick, Y. Jiang, E. Scheer, Mechanically Modulated Sideband and Squeezing Effects of Membrane Resonators, to appear in Phys. Rev. Lett.
2. R. Fittipaldi, R. Hartmann, M. T. Mercaldo, S. Komori, A. Bjørlig, W. Kyung, Y. Yasui, T. Miyoshi, L. Olde-Olthof, C. Palomares-Garcia, V. Granata, I. Keren,, W. Higemoto, A. Suter, T. Prokscha, A. Romano, C. Noce, C. Kim, Y. Maeno, E. Scheer, B. Kalisky, J. W. A. Robinson, M. Cuoco, Z. Salman, A. Vecchione, A. Di Bernardo, Unveiling unconventional magnetism at the surface of Sr₂RuO₄, Nature Commun., published online, DOI: <https://www.nature.com/articles/s41467-021-26020-5> ,
3. F. Yang, F. Hellbach, F. Rochau, W. Belzig, E. M. Weig, G. Rastelli, E. Scheer, Persistent response in ultra-strongly driven mechanical membrane resonators, Phys. Rev. Lett. **127**, 014304 (2021)
4. Yang, F. Rochau, J. Huber, A. Brioussel, G. Rastelli, E. M. Weig, and E. Scheer, *Spatial modulation of nonlinear flexural vibrations of membrane resonators*, Phys. Rev. Lett. **122**, 154301 (2019).
5. S. Diesch, P. Machon, M. Wolz, C. Sürgers, D. Beckmann, W. Belzig, and E. Scheer, *Creation of equal-spin triplet superconductivity at the Al/EuS interface*, Nature Commun. **9**, 5248 (2018).
6. M. A. Karimi, S. G. Bahoosh, M. Herz, R. Hayakawa, F. Pauly, and E. Scheer, *Shot noise of 1,4-benzenedithiol single-molecule junctions*, Nano Lett. **16**, 1803 (2016).
7. A. Di Bernardo, S. Diesch, Y. Gu, J. Linder, M.G. Blamire, E. Scheer, and J. W. A. Robinson, *Signature of magnetic-dependent gapless odd-frequency states at superconductor / ferromagnet interfaces*, Nature Commun. **6**, 8053 (2015).
8. F. Strigl, C. Espy, M. Bückle, E. Scheer, and T. Pietsch, *Emerging magnetic order in platinum atomic contacts and chains*, Nature Commun. **6**, 6172 (2015).
9. C. Schirm, M. Matt, F. Pauly, J. C. Cuevas, P. Nielaba, and E. Scheer, *An electromigration-driven single-atom memory*, Nature Nanotech. **8**, 645 (2013).
10. Y. Kim, H. Song, F. Strigl, H.-F. Pernau, T. Lee, and E. Scheer, *Conductance and vibrational states of single-molecule junctions controlled by mechanical stretching and material variation*, Phys. Rev. Lett. **106**, 196804 (2011).
11. D. Guhr, D. Rettinger, J. Boneberg, A. Erbe, P. Leiderer, and E. Scheer, *Influence of laser light onto the electronic transport through atomic-sized contacts*, Phys. Rev. Lett. **99**, 086801 (2007).
12. E. Scheer, N. Agraït, J. C. Cuevas, A. Levy Yeyati, B. Ludoph, A. Martín-Rodero, G. Rubio Bollinger, J. M. van Ruitenbeek, and C. Urbina, *The signature of chemical valence in the electrical conduction through a single-atom contact*, Nature **394**, 154 (1998).

b) Other publications

13. J. C. Cuevas, E. Scheer: *Molecular Electronics: An Introduction to Theory and Experiment*, (2nd expanded & revised edition, 858 pages), World Scientific Publishing, Singapore (2017), ISBN-10: 981-4282588.

Bibliographic identifiers

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