

Curriculum Vitae

PERSONAL INFORMATION

Family name, First name: Veneri Alessandro

Researcher unique identifier: <https://orcid.org/0000-0003-3820-9064>

• EDUCATION

12/10/2018 – 08/02/2024 PhD in theoretical condensed matter physics

School of Physics, Engineering and Technology, University of York, United Kingdom

01/10/2016 – 01/10/2018 MSc in theoretical condensed matter physics

Dipartimento di Matematica e Fisica, Università di Roma Tre, Italia

01/10/2013 – 01/10/2016 BSc in physics

Dipartimento di Matematica e Fisica, Università di Roma Tre, Italia

• CURRENT POSITION

12/01/2024 – Ongoing Research Postdoctoral Position

Dipartimento di Ingegneria dell'informazione, elettronica e telecomunicazioni, Sapienza Università di Roma, Italia

• PUBLICATIONS

- 1) Alessandro Veneri, Francesco Quintavalle, Thierry Valet, Roberto Raimondi, "Microscopic theory of the inverse spin galvanic effect in anisotropic Rashba models", submitted PRB (2025), on arxiv: <https://arxiv.org/abs/2512.05799>
- 2) A. Veneri *et al.*, "Retrieval Methods for Microwave Remote Sensing of Soil Moisture, Above-Ground Biomass, and Freeze-Thaw Dynamics: A review," in *IEEE Geoscience and Remote Sensing Magazine*, doi: 10.1109/MGRS.2025.3623398.
- 3) Alessandro Veneri, Tatiana G. Rappoport, Aires Ferreira, 'Extrinsic Orbital Hall Effect: Orbital Skew Scattering and Crossover between Diffusive and Intrinsic Orbital Transport', Phys. Rev. Lett. 134, 136201 (2025). DOI: <https://doi.org/10.1103/PhysRevLett.134.136201>
- 4) Alessandro Veneri, David T.S. Perkins, Csaba G. Peterfalvi, Aires Ferrera, "Twist-Angle Controlled Collinear Edelstein Effect in van der Waals Heterostructures", Phys. Rev. B 106, L081406 (2022). DOI: <https://doi.org/10.1103/PhysRevB.106.L081406>
- 5) Alessandro Veneri, David T.S. Perkins, Aires Ferreira, "Nonperturbative approach to interfacial spin-orbit torques induced by Rashba effect", Phys. Rev. B 106, 235419 (2022). DOI: <https://doi.org/10.1103/PhysRevB.106.235419>
- 6) David T.S. Perkins, Alessandro Veneri, Aires Ferreira, "Spin Hall Effect: Symmetry Breaking, Twisting, and Giant Disorder Renormalization", Phys. Rev. B 109, L241404 (2024). DOI: <https://doi.org/10.1103/PhysRevB.109.L241404>.
- 7) Alessandro Veneri, Paolo Burghignoli, Davide Comite, "Microwave Imaging With Circular Arrays: Comparative Analysis Between OAM and MIMO, IEEE Transactions on Antennas and Propagation (2024) DOI: [10.1109/TAP.2024.3516358](https://doi.org/10.1109/TAP.2024.3516358)

- **SCIENTIFIC MEETINGS AND EXPEDITIONS**

- 1) 22/01/2024 – SIESTA Kick off, Barcelona, Spain – Contribution in talk presentation
- 2) 5-8/07/2022 – Graphene 2022, Aachen, Germany – Poster presentation: Spin-Charge Conversion in Graphene with Random Spin-Orbit Coupling and Magnetic Impurities
- 3) 14-18/03/202 – APS March Meeting, Chicago, Illinois, USA – Talk: Interfacial antidamping spin-orbit torques in topological insulator/ferromagnet bilayers induced by skew scattering
- 4) 21-26/08/2021 – CMD29, Manchester, UK – Talk: Prediction of Purely Interfacial Giant Antidamping Spin-Orbit Torque induced by Skew Scattering
- 5) 15-19/03/2021 – APS March Meeting, online – Talk: Prediction of Purely Interfacial Giant Antidamping Spin-Orbit Torque induced by Skew Scattering
- 6) 23-24/09/2020 – NanoPT2020, online – Talk: Prediction of Purely Interfacial Giant Antidamping Spin-Orbit Torque induced by Skew Scattering
- 7) 19-23/07/2020 – Graphene2020, online – Poster presentation: Nonperturbative quantum diagrammatic theory of interfacial spin-orbit torques

- **FELLOWSHIPS AND AWARDS**

12/10/2018 – 08/02/2024 Scholarship, Royal Society, University of York/ United Kingdoms

- **TEACHING ACTIVITIES**

2017 – 2018 Teaching assistant – Classical Mechanics and Thermodynamics, Dipartimento di Matematica e Fisica, Università di Roma Tre, Italia

Autorizzo il trattamento dei miei dati personali ai sensi del Dlgs 196 del 30 giugno 2003 e dell'art. 13 GDPR