

Tomasz Dietl - Curriculum Vitae (May 2023)

BIOGRAPHICAL INFORMATION

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[Web of Science](#)

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[Scopus](#)

[Google Scholar](#)

autobiographical research essay: [arXiv:2103.07456](https://arxiv.org/abs/2103.07456)

Born: Poznań, Poland, October 1st, 1950

Citizenship: Polish

Languages: Polish (native), English, French, Russian

DEGREES AND TITLES

- M.S.: Department of Physics, University of Warsaw (1973)
- Ph.D. : Institute of Physics, Polish Academy of Sciences, Warsaw (1977)
- Habilitation: Institute of Physics, Polish Academy of Sciences (1983)
- Professor, scientific title and position at Institute of Physics, Polish Academy of Sciences (1990)

PROFESSIONAL EXPERIENCE

Present Positions:

- Ordinary Professor and Head of the International Centre for Interfacing Magnetism and Superconductivity with Topological Matter – MagTop, Scientific Division ON-6 at the Institute of Physics, Polish Academy of Science

Past Positions:

- 1973–1976 — PhD Student, Institute of Physics, Polish Academy of Sciences, Warsaw (IF PAN)
- 1976–1977 — Research Assistant, IF PAN
- 1978 — French Government Scholarship, Laboratoire de Physique de la Matière Condensée, Ecole Polytechnique, Palaiseau, France (c/o prof. I. Solomon, 10 months)
- 1979–1983 — Research Associate, Institute of Physics, PAS, 1986-1990, docent
- 1984–1985 — Alexander von Humboldt Research Fellowship, Physik-Department Technische Universität München, Garching, Germany (c/o prof. F. Koch, 14 months)

- 1986–2003 — head - Group of Low Temperature Physics, IF PAN
- 1990— present Ordinary Professor, IF PAN
- 1988, 89 — Visiting Scientist, Francis Bitter Magnet Lab, MIT, Cambridge, USA (6 weeks)
- 1991–92, 1996–98 — Visiting Professor, J. Kepler Univ., Linz, Austria (13 months in total)
- 1993–2000 — Visiting Professor, J. Fourier Univ. Grenoble, France (10 months in total)
- 1993–2001 — Founding member and Professor, College of Science, Warsaw
- 1995–1996 — Deputy Rector, College of Science, Warsaw
- 1999 — Professor, Tohoku University, Sendai, Japan (12 months)
- 2003 — Humboldt Research Award at Regensburg University, Germany (7 months)
- 2004–2017 — Founder and head – Laboratory of Cryogenic and Spintronic Research and Group of Spin Phenomena Physics, IF PAN
- 2004–2017 — Founder and head – Group of Spin Phenomena Physics, IF PAN
- 2004–2016 — part-time appointment at Chair of Condensed Matter Physics, Institute of Theoretical Physics, University of Warsaw
- 2011–2014 — member of Scientific Council of European Research Council (ERC)
- 2012–2014 — member of Steering Committee of European Research Council (ERC)
- 2012–2023 — Professor and Principal Investigator at World Premier Institute – Advanced Materials Research Institute, Tohoku University, Sendai (part-time)
- 2017–2018 — President of the Management Board and a Group Leader at the Research Foundation MagTop - International Centre for Interfacing Magnetism and Superconductivity with Topological Matter, funded by a grant from the Foundation for Polish Science, carried out from the funds of the European Regional Development Fund under the Smart Growth Operational Programme (SG OP), Priority Axis 4: Increasing the research potential, Measure 4.3: International Research Agendas (IRA)
- 2018–present — Head of the International Centre for Interfacing Magnetism and Superconductivity with Topological Matter – MagTop, Scientific Division ON-6 at the Institute of Physics, Polish Academy of Sciences, funded by an IRA grant from the Foundation for Polish Science

DISTINCTIONS

- Maria Skłodowska-Curie Award, Polish Academy of Sciences, 1997
- Member of Polish Academy of Sciences, 1998—; Ordinary Member, 2010 —
- Chartered Physicist, 2000— , and fellow 2004— , The Institute of Physics, UK
- Humboldt Research Award, Germany, 2003
- Agilent Technologies Europhysics Prize, 2005 (with David D. Awschalom and Hideo Ohno)
- Prize of Foundation for Polish Science, 2006
- Ordinary Member of Science Society of Warsaw, 2009—
- Member of Polish Academy of Arts and Sciences, 2009—
- Marian Smoluchowski Medal of the Polish Physical Society, 2010
- Member of Academia Europaea, 2011—
- Member of the Scientific Council and Steering Committee of the European Research Council (ERC), 2011–2014
- Commander's Cross of the Order of *Polonia Restituta*, The President of Poland, 2013
- Fellow of the American Physical Society, 2015

- Outstanding Referee of APS Journals, 2019
- Fellow International of the Japanese Society of Applied Physics, 2019

PLENARY AND SEMIPLenary TALKS AT MULTISESSION CONFERENCES

e.g., E-MRS Fall Meeting (Warsaw, 2004, 2010, 2017); Moscow International Symposium on Magnetism (2008); European Physical Society Meetings (Bern 2005, Prague 2004, Budapest 2002); 27th International Conference on the Physics of Semiconductors (Flagstaff 2004); Joint European Magnetic Symposia (Dresden 2003); 20th International Conference on Magnetism (Barcelona 2015).

EXECUTED RESEARCH PROJECTS (in all projects serving as PI/local person in charge)

MagTop, International Research Agenda Programme, Foundation for Polish Science (2017-2023); MAESTRO project of National Science Centre, Poland (2012-2017); FunDMS; European Research Council, Advanced Grant (ERC-2008-AdG-227690) (2008-2013); InTechFun (Innovative Economy Operational Programme, Structural Funds, EC (2008-2013); SPINTRA, European Science Foundation CRP (2006 - 2009); NANOSPIN EC FP6 IST project (2006-2008); SEMICONDUCTOR SPINTRONICS, Ohno ERATO Project of Japan Science and Technology Agency (2003-2008); FENIKS EC FP5 GROWTH project (2002-2005); AMORE EC FP5 GROWTH project (2002-2003); Professor Subsidy of the Foundation for Polish Science (2000-2002); five successive three years' local projects of Ministry of Science (1991-2005)

participation in bilateral collaboration projects and European networks:

PL-AU "Ost-West"; PL-FR "Polonium", PL-USA – Maria Curie Fund; PHANTOMS network in mesoscopic physics (since 1993); *Nanoscale Semiconductor Spintronics (SemiSpinNet)* within the Maria Curie Initial Training Networks Action (2009-2012).

PUBLICATIONS

since 1975: (i) over 290 English peer-reviewed research papers, (ii) over 100 English reviews in peer-reviewed journals, book chapters, and encyclopaedia, (iii) over 30 popularizing articles in Polish; over 200 invited talks at international meetings, conferences, schools; total citation index: over 24 000; h-factor: over 58 (WoS).

PRINCIPAL RESEARCH ACCOMPLISHMENTS

- Revelation of charge transport peculiarities in zero- and narrow-gap gap semiconductors and alloys
- Elucidation of difference between momentum relaxation and quantum life time in quantum transport

- Demonstration of role of surface conductance in hydrogenated a-Si
- Theory of bound magnetic polarons and its thermodynamic, optical, transport, and dynamic signatures
- Pioneering field-effect and quantum Hall effect studies of dilute magnetic semiconductors (DMS)
- Discovery of new spin effects in localisation phenomena, metal-insulator transition, universal conductance fluctuations, and quantum noise in doped semiconductors, DMS, and their nanostructures
- Elucidation of the origin of *sp-d* interactions and strong coupling effects in DMS
- Theory of ferromagnetism in DMS and topological materials, and the origin of high temperature ferromagnetism in DMS
- Semiconductor spintronics of topological materials, non-magnetic semiconductors, dilute ferromagnetic semiconductors, and hybrid ferromagnetic metal/semiconductor structures

EDUCATION/TEACHING/TRAINING ACCOMPLISHMENTS

1. Co-foundation and co-organisation of the College of Science
2. Four of former PhD students completed habilitation in physics, another one is deputy director of Institute of Physics, Polish Academy of Sciences
3. In-house training of PhD students from abroad (Austria, France, Germany, UK, Ukraine).

OTHER SELECTED PROFESSIONAL ACTIVITIES

- **European Physical Society:** Low Temperature Section, Board Member, 1999—present
- **International Union of Pure and Applied Physics (IUPAP):** Member of Low Temperature Commission (C5), 2003-08; Associated Member of Semiconductor Commission (C8), 2003-08
- **European Magnetism Association:** Council Member 2018-2020
- **Editorial Boards:** *Postępy Fizyki* 1986—2002; *Semicond. Sci. Technology* 2001—2016; *J. Magn. Magn. Materials* 2008—2010; *Phys. Rev. B* 2012—2018
- **Evaluation panels** (selection): ERC Starting Grants (2008-2011); DFG Priority Program 1285 "Semiconductor Spintronics" (2009); External evaluation of ISSP, University of Tokyo (2016); Review of Science Foundation Ireland AMBER Centre (2017); Evaluation of the Helmholtz Zentrum Berlin (2018)
- **Academia Europaea:** Committee Member, section Physics and Engineering Sciences 2023-
- **National Science Centre (NCN):** Council Member 2023-2026

Scientific Committees of International Conferences and Schools

- International School on Physics of Semiconducting Compounds, Jaszowiec, Poland '88-'97; 1989 (chair), '99-01; '04-'07; '12-'15
- International School on Semiconductors, Alushta, Ukraine '93-'97
- International Conference on High Magnetic Fields in Semiconductor Physics, Cambridge MIT, USA '94; Nijmegen, The Netherlands '98
- The First International Conference on Low Dimensional Structures and Devices, Singapore '95
- International Conferences on Localization and Quantum Transport in Solids, Jaszowiec, Poland '96 (chair); Hamburg '99; Tokyo '02
- International Conference on Physics of Semiconductors (IUPAP), Jerusalem '98; Osaka '00; Flagstaff, USA '04; Vienna '06; Rio de Janeiro '08; Seoul '10, Zurich '12, Montpellier '18, Sydney '20->'22, Ottawa'24
- International School of Theoretical Physics (organized by Silesian University), Ustroń, Poland, 1998, 2004, 2006
- International Conference on Electronic Properties of Two-Dimensional Systems, Ottawa '99; Prague '01; Nara '03; Kobe '09; Tallahassee '11; Sendai '15; Grenoble'23
- International Conference on Low Temperature Physics (IUPAP), Helsinki, Finland '99, Kyoto, Japan, '02, Orlando, USA, '05; Amsterdam '08; Beijing '11; Goteborg'18, Sapporo '20->'22
- International Conference on Magnetism (IUPAP) Seoul '12; Barcelona '15; San Francisco '18
- International Conference on Modulated Semiconductor Structures, Linz, Austria '01, Nara Japan '03, Kobe '09, Tallahassee '11, Wrocław '13 (chair), Sendai '15; College Park '17, Wuerzburg '20, Grenoble'23
- International Conference and School on Semiconductor Spintronics and Quantum Information Technology, SpinTech II-VI, Brugge, Belgium '03; Awaji Island, Hyogo, Japan '05; Malibu, Hawaii, USA '07; Kraków, '09 (chair); Matsue, Japan '11; Chicago '13; Basel '15; Fukuoka'17
- International Conference on Superlattices, Nanostructures and Nanodevices, Toulouse, France '02; Cancun, Mexico '04; Istanbul, Turkey '06; Dresden '12; Madrid '18, Vietnam '20
- International Conference on Physics and Applications of Spin-related Phenomena in Semiconductors, Würzburg, Germany '02; Santa Barbara, USA '04; Sendai, Japan '06; Tokyo '10; Eindhoven '12; Kobe '16; Linz '18
- AFSOR Workshop on Ferromagnetic Semiconductors, Edinburgh, Scotland, '05 (chair).
- 4th Forum on New Materials (within 11th CIMEC) Acireale, Sicily, Italy '06.
- Joint European Magnetic Symposia, San Sebastian, Spain '06, Parma '13
- Fall Meeting of European Materials Society Meeting, Warsaw, Poland '06, '11, '14, '16, '17 (symposium chair)
- March Meeting of American Physical Society, Denver, Co, USA '07