Curriculum vitae
Anton Poluektov

PERSONAL INFORMATION

Family name, First name:	POLUEKTOV Anton
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RESEARCH ACTIVITIES

Experimental collaborations

2009 – present	LHCb collaboration (CERN): physics data preselection (framework developer and coordinator), analyses of beauty baryon decays, analyses involving open-charm final states (convener of the physics working group), global particle identification (developer of tools and convener of the working group), internal review of various analyses
2002 – 2013	Belle collaboration (KEK, Tsukuba, Japan): operation of electromagnetic calorimeter, measurements of the UT angle γ, internal review of various analyses
1999 – 2010	KEDR collaboration (experiment at VEPP-4M collider in BINP, Novosibirsk, Russia): operation of straw-tube tracker, track reconstruction, precision measurements of masses of J/ψ and D mesons

Phenomenological studies

- Phenomenological studies related to semileptonic B decays (angular analyses, CP violation)
- Phenomenological studies related to measurement of the CKM angle γ in tree-level decays:
  - Proposal and feasibility study of model-independent method to measure γ using multibody D decays.
  - Effects of charm mixing and CP violation in charm on precision γ measurement.
- Model-independent technique to measure charm mixing parameters.
- Development of physics case for a high-luminosity τ-charm factory.

Advanced data analysis techniques

- Applications of machine-learning techniques to data analysis and instrumentation effects: development of the software packages, application to calibration of particle identification response, acceptance and background description at LHCb.
- Development of amplitude analysis framework based on machine-learning library TensorFlow

EDUCATION

2007	PhD thesis, “Measurement of the angle φ3 of the Unitarity Triangle in $B \to DK$ decays with the Belle detector”, Budker Institute of Nuclear Physics, Novosibirsk, Russia.
2000	Master thesis, “Track reconstruction in the vertex chamber of KEDR detector” Department of Physics, Novosibirsk State University, Novosibirsk, Russia
1998	Bachelor thesis, “Calibration of KEDR Time-Of-Flight system with cosmic rays”, Department of Physics, Novosibirsk State University, Novosibirsk, Russia.

EMPLOYMENT

2018 –	Directeur de recherche 2eme classe (permanent research staff), Centre de physique des particules de Marseille (CPPM), IN2P3, CNRS, France
2016 – 2018	Senior research fellow, University of Warwick, UK
2009 – 2016	Research fellow, University of Warwick, UK
2003 – 2009	Research associate, Budker institute of Nuclear Physics, Novosibirsk, Russia
2005 – 2008	Teaching assistant (part-time), Novosibirsk State University, Russia

FELLOWSHIPS, AWARDS AND GRANTS

2024	Grant VINCI 2024 to fund the joint PhD contract between AMU and Tor Vergata University (Rome, Italy)
2014 – 2016	Grant of Russian Foundation for Basic Research (RFBR) “Studies of CP violation in B meson and b baryon decays at LHCb” (grant 14-02-00569A).
2011 – 2012	Russian presidential grant for young researchers, “Model-independent measurement of the parameters of CP violation in decays of B and D mesons with Belle detector”.
2008	Young scientist award of Novosibirsk regional administration “Precision measurements of masses of elementary particles”

SUPERVISION

2024 –	Thesis supervision at CPPM: Léa Dreyfus, “Studies of semileptonic decays of B mesons at LHCb in Run 3”
2024 –	Thesis supervision at CPPM: Anna-Maria Heyn, “Study of CP violation in the semileptonic decays of beuty hadrons”
2022 – 2025	Thesis supervision at CPPM: Bogdan Kutsenko, “Search for effects beyond Standard Model in semileptonic decays of B hadrons at LHCb”
2020 – 2023	Thesis supervision at CPPM: Vlad Dedu, “Search for CP violation in semileptonic decays of B mesons at LHCb”
2009 – 2018	Supervision of PhD students from the University of Warwick, BINP and Moscow State University on attachment at CERN
2013, 2016	Supervision of CERN summer students
2005 – 2008	Supervision of master students at Novosibirsk State University and BINP, Russia

TEACHING ACTIVITIES

2023 –	2nd year master course on experimental flavour physics at Aix-Marseille University
2017	Invited introductory course on high-energy physics and astrophysics for 1st-2nd year students at Irkutsk State University, and lecture at the Baikal Summer School (13–20 July 2017, lake Baikal, Russia).
2005 – 2008	Seminar classes on basics of elementary particle physics for the students of Novosibirsk State University, Russia (2 hours per week)
2003 – 2004	Practicum on “Computer simulation of physical phenomena” at the Higher College of Informatics, Novosibirsk, Russia (1 hour per week)

ORGANISATION OF SCIENTIFIC EVENTS

2019,2021	Member of the International Organising Committee for the International Workshop on Partial Wave Analyses and Advanced Tools for Hadron Spectroscopy (PWA/ATHOS 2019), 2 – 6 September 2019, Rio de Janeiro, Brazil
2012	Convener of working group V “Direct CP violation in B decays” at the 7th International Workshop on CKM Unitarity Triangle (CKM2012), 28 Sep – 02 Oct 2012, Cincinnati, USA (170 participants, 16 talks in the working group).
2008	Scientific secretary of the International Workshop on tau-lepton physics (Tau-2008), Budker Institute of Nuclear Physics, Novosibirsk, Russia, 22 – 29 Sep 2008.

SCIENTIFIC RESPONSIBILITIES

2024 –	Coordinator of the working group “Calibration and alignment” of the RTA (“Real-time analysis”) project at LHCb
2021 – 2024	Coordinator of the working group “Selections” of the RTA project at LHCb
2017 – 2020	Convener of “Particle identification and calorimeter objects” physics performance working group at LHCb. Member of LHCb Physics Planning Group and Operations Planning Group.
2013 – 2015	Convener of “Beauty to open charm” physics working group at LHCb. Member of LHCb Physics Planning Group.
2011 – 2013	Coordinator of the physics data preselection (“stripping”) at LHCb.
2011 – 2013	Co-editor of “Physics at B factories” book, Dalitz plot analysis section.
2009 –	Reviewer for Phys. Rev. D journal (American Physical Society)