

CURRICULUM VITAE

PERSONAL DATA

First name: Jaroslav
Last name: ZALESAK
Date of Birth: December 5, 1971
Place of Birth: Hranice na Moravě, Czech Republic
Nationality: Czech
Address: Podkovářská 933/1, Praha 9, Czech Republic
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Marital status: Married
Family: wife Michaela, sons Matěj (2009) and Jonáš (2011)

EDUCATION

1990 - 1995: Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Degree: Mgr.
Nuclear Physics - Diploma thesis: Measurement of the Deep Inelastic Scattering of Electrons on Protons with the H1 SpaCal calorimeter.
1995 - 2002: Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Degree: Ph.D., RNDr.
Subnuclear Physics - Dissertation thesis: Measurement of the Proton Structure Function $F_2(x, Q^2)$ using the H1-detector at the HERA Collider in DESY

EMPLOYMENT EXPERIENCES

1996 - 2002: Faculty of Mathematics and Physics, Charles University
Institute of Particle and Nuclear Physics, 180 00 Prague 8,
V Holesovickach 2, Czech Republic
Position: Research scientist
Many several months' stays (about 2 years in total) in the laboratory DESY, Hamburg within the H1 collaboration.
2002 - 2003: Civil Army Service
2003 - now: Institute of Physics, Prague
Address: Institute of Physics of the Academy of Sciences of the Czech Republic, v.v.i.
182 21 Prague 8, Na Slovance 2, Czech Republic.
Positions: Postdoctoral researcher (2003), Research physicist (2006)
2009- 2010: 18 months stay within the Framework of the Agreement between Institute of Physics, Prague and DESY, Hamburg as an international postdoctoral researcher (FLC group).
2012-2015: Guest Scientist in Fermilab's International Fellowship Program at Fermilab National Laboratory, Batavia, IL, USA, working on the NOvA experiment.
2015-2016: Application Physicist I at Fermilab National Laboratory, Batavia, IL, USA; the one-year term position (Oct 2015 – Oct 2016).

RESEARCH INTEREST

1995 - 2000: Energetic calibration of the backward calorimeter SpaCal and 'On-call' service at this calorimeter at the H1-experiment in DESY Hamburg.

- 1997 - 2002:** Experimental high energy physics: Precise measurement of the inclusive deep-inelastic e^+p scattering with the H1 detector at the HERA collider; Extraction of the proton structure functions F_2 , F_L .
- Since 2002:** Activities in the CALICE collaboration at the future linear collider projects:
- Measurements of properties of APDs and multianode photomultipliers (2002-5);
 - Measurement of the calorimeter energy resolution with the prototype (MiniCal) at DESY positron beam 1 - 6 GeV (2004-5);
 - Calibration and monitoring systems for the analogue HCAL physics prototype, UV LED quality tests (2005-7);
 - Analysis of data from the Physics prototype of the hadronic calorimeter (AHCAL): beam tests at CERN, Fermilab (2006-2013);
 - R&D of the calibration systems with optical fibers for calorimeters at future linear collider experiments (2007-2013).
- Since 2011:** NOvA experiment:
- Testing and studying of characteristics of APDs used in the NOvA experiment in the newly built laboratory in Prague (2012-2013).
 - Data Acquisition System (DAQ) expert, DAQ software release manager at Fermilab, IL, USA (2012-2016).
 - Experiment Run Coordinator (Mar 2014-Sep 2016)
- Since 2015:** DUNE experiment
- Participation in the DUNE Far Detector Photodetection System consortium.
 - Photosensors characteristics measuring in Prague laboratory, QA/QC test analysis.
 - CERN ProtoDUNE installation, testing and integration, operating detector during beam tests, analysis data with the Photon detection systems.

GRANTS

2018 – 2022: Inter-excellence LTT18001 (MEYS) ‘Collaboration on experiments in Fermi National Accelerator Laboratory, USA’ – main investigator.

OTHERS (Organization posts, Membership)

- 2014 – 2015:** NOvA experiment
- Run Coordinator (staying at Fermi National Laboratory, USA)
 - Charged with optimizing the use of the near and far detectors to meet the physics goals of the experiment.
 - Directing and deciding the priority and scheduling of detector systems development and maintenance.
 - Responsible for reports to the weekly All Experimenters’ Meeting.
 - Ex officio member of the Institutional Board and Executive Committee at NOvA experiment.
- Since 2016:** NOvA experiment
- Member of the NOvA Speaker Committee (NOSC).
- 2015 – 2016:** Operation Support Group member in the Neutrino Division at Fermilab.
- Technical support several old or new experiments under the Neutrino Division (Minerva, Minos+, and NOvA).
- Since 2017:** DUNE experiment
- Institutional Board member for the Institute of Physics, CAS.
 - ProtoDUNE-SP Photon Detector System Analysis WG – convener (2019)
 - Consortium Project Management Board in DUNE Photodetection System (PDS) – Czech representative member (2019)

PRESENTATION AT CONFERENCES

- **19th Lomonosov 2019** (Moscow): Results from the NOvA Experiment
- **Neutrino Geoscience 2019** (Prague): Neutrino Research in the Czech Republic
- **18th Lomonosov 2017** (Moscow): Recent Results from the NOvA Experiment
- **IEEE 2016** (Strasbourg): Instrumentation of the Detectors and DAQ Performance in the NOvA Experiment.
- **CHEP 2013** (Amsterdam): The NOvA Far Detector Data Acquisition System (proceedings published 2014 in J.Phys.Conf.Ser. 513 (2014) 012041)
- **IEEE 2011** (Valencia): Calibration System with Optical Fibres for Calorimeters at Future Linear Collider Experiments (poster).
- **LCWS 2012** (Granada): Calibration issues for scintillator tile AHCAL prototypes.
- **ALCPG 2011** (Eugene, OR): Calibration issues for the CALICE 1m3 AHCAL prototype.
- **IWLC 2010** (Geneva): Calibration issues for the CALICE 1m3 AHCAL prototype.
- **Spin 2009** (Prague): Calibration of the Hadron Calorimeter Prototype for the ILC (poster).
- **ILCW 2008** (Chicago): ECAL and HCAL EUDET Prototypes.
- **ECFA 2008** (Warsaw): Optical part of the CMB for AHCAL-CALICE.

PUBLICATIONS

Author of

- 10 publications within the **NOvA** collaboration (2014),
- 7 published paper within the **DUNE/LBNF** collaboration (2015),
- 27 publications within the **CALICE** collaboration (since 2005),
- 6 publication within the **ILC** project (since 2005),
- 3 publications under **EUDET** program (since 2006)
- 2 published **proceedings** from the conferences (LCWS 2012 and IEEE 2012).

Co-author of

- 158 publications within **H1** (+ HERA) experiment collaboration at DESY, Hamburg (since 1997).

Most related topics:

- Jaroslav Zálešák for the NOvA collaboration, *Recent results from the NO ν A experiment*, **DOI: 10.1142/9789811202339_0008**
- *First Measurement of Neutrino Oscillation Parameters using Neutrinos and Antineutrinos by NOvA*, NOvA Collaboration, **Phys.Rev.Lett. 123 (2019) no.15, 151803.**
- *Observation of seasonal variation of atmospheric multiple-muon events in the NOvA Near Detector*, NOvA Collaboration, **Phys.Rev. D99 (2019) no.12, 122004.**
- *New constraints on oscillation parameters from ν_e appearance and ν_μ disappearance in the NOvA experiment*, NOvA Collaboration, **Phys.Rev. D98 (2018) 032012.**
- Jaroslav Zalesak et al., *The NOvA Far Detector Data Acquisition System*, **J.Phys.Conf.Ser. 513 (2014) 012041.**
- P. Adamson *et al.* [NOvA Collaboration], *Constraints on Oscillation Parameters from ν_e Appearance and ν_μ Disappearance in NOvA*, **FERMILAB-PUB-17-065-ND.**
- P. Adamson *et al.* [NOvA Collaboration], *First measurement of muon-neutrino disappearance in NOvA*, **Phys. Rev. D 93 (2016) no.5.**
- P. Adamson *et al.* [NOvA Collaboration], *First measurement of electron neutrino appearance in NOvA*, **Phys. Rev. Lett. 116 (2016) no.15.**

- R. Acciarri *et al.* [DUNE Collaboration], *Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE): Volume 2: The Physics Program for DUNE at LBNF*, **arXiv:1512.06148** [physics.ins-det].
- C. Adloff *et al.* [CALICE Collaboration], *The Time Structure of Hadronic Showers in highly granular Calorimeters with Tungsten and Steel Absorbers*, **JINST 9 (2014) P07022**.
- C. Adloff *et al.* [CALICE Collaboration], *Validation of GEANT4 Monte Carlo Models with a Highly Granular Scintillator-Steel Hadron Calorimeter*, **JINST 8 (2013) 07005**
- C. Adloff *et al.* [CALICE Collaboration], *Electromagnetic response of a highly granular hadronic calorimeter*, **JINST 6 (2011) P04003** [arXiv:1012.4343].
- C. Adloff *et al.* [CALICE Collaboration], *Construction and Commissioning of the CALICE Analog Hadron Calorimeter Prototype*, **JINST 5 (2010) P05004** [arXiv:1003.2662].