

Curriculum Vitae

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Personal Data:

Birth: July 16, 1979, Stará L'ubovňa, Slovakia

Citizenship: Slovak

Family: Married, two children

Education:

- PhD., Nuclear and Subnuclear Physics, Institute of Experimental Physics, Slovakia (2007),
PhD Thesis: Top quark mass measurement in dilepton channel
(advisor Dr. J. Antoš)
- M.S., Physics, P.J.Šafárik University in Košice, Slovakia (2002),
Specialization: Nuclear and subnuclear physics
Thesis: Charged particles tracks reconstruction in CDF vertex detector
(advisor Dr. J. Antoš)

Positions Held:

- Post-doc, Institute of Physics, Academy of Sciences of the Czech republic
(2011 – present)
- Guest Scientist (International Fellowship), Fermi National Accelerator
Laboratory (FNAL) (2008 – 2010)

- Post-doc, Institute of Experimental Physics Slovak Academy of Sciences (2008 – 2010)
- PhD student, Institute of Experimental Physics Slovak Academy of Sciences (2003 – 2007)
- Guest Scientist, Fermi National Accelerator Laboratory (FNAL) (2002 – 2004)

Professional Experience:

- CDF experiment (2002 – Present)
 - **physics:**
 - * top quark mass measurement in dilepton channel at CDF (2002 – 2007)
First measurement of top quark mass in dilepton channel in Run II at Tevatron. A new method developed for measuring top quark mass using cross-section constraint.
The results awarded twice as “Fermilab Result of the Week”.
 - * Search for a Higgs boson decaying to two W bosons (2008 – present)
The result was a major contribution (together with D0 $H \rightarrow WW$ result) to the first exclusion of Higgs boson (within mass range 162-166 GeV) at Tevatron.
 - * measurement of W boson helicity fractions from top quark decay (2009 – present)
Results approved by CDF collaboration.
 - **computing:**
 - * processing CDF experiment data on computing farm, software maintenance, development for PC farm data processing (2002 – 2004)
 - * serving as Offline Operations Manager (2008), shared responsibility for processing of CDF data (2008 – 2010)
Coordinating the calibration of CDF detector.

* serving as coordinator for Monte-Carlo samples production within Higgs group (2008 – 2010)

Awards:

- The best publication by young researcher (under 35) of Slovak Academy of Sciences (2008): 3rd place (section Physical, Space, Earth, and Engineering Sciences)
- The best result in basic research at Institute of Experimental physics, Slovak Academy of Sciences (2007)

Selected Publications:

- [1] T. Aaltonen *et al.* [CDF Collaboration and D0 Collaboration], “Combined Tevatron upper limit on $gg \rightarrow H \rightarrow W^+W^-$ and constraints on the Higgs boson mass in fourth-generation fermion models,” arXiv:1005.3216 [hep-ex].
- [2] T. Aaltonen *et al.* [The CDF Collaboration], “Inclusive Search for Standard Model Higgs Boson Production in the WW Decay Channel using the CDF II Detector,” Phys. Rev. Lett. **104**, 061803 (2010) [arXiv:1001.4468 [hep-ex]].
- [3] T. Aaltonen *et al.* [CDF and D0 Collaborations], “Combination of Tevatron searches for the standard model Higgs boson in the W+W- decay mode,” Phys. Rev. Lett. **104**, 061802 (2010) [arXiv:1001.4162 [hep-ex]].
- [4] T. Aaltonen *et al.* [CDF Collaboration], “Search for a Higgs Boson Decaying to Two W Bosons at CDF,” Phys. Rev. Lett. **102**, 021802 (2009) [arXiv:0809.3930 [hep-ex]].
- [5] T. Aaltonen *et al.* [CDF Collaboration], “Cross-section constrained top quark mass measurement from dilepton events at the Tevatron,” Phys. Rev. Lett. **100**, 062005 (2008) [arXiv:0710.4037 [hep-ex]].

- [6] R. Lysák (Košice,IEF), “Top quark mass measurement in dilepton channel,” FERMILAB-THESIS-2007-12, Jun 2007.
- [7] A. Abulencia *et al.* [CDF Collaboration], “Top quark mass measurement from dilepton events at CDF II,” Phys. Rev. Lett. **96**, 152002 (2006) [arXiv:hep-ex/0512070].
- [8] A. Abulencia *et al.* [CDF Collaboration], “Measurement of the top quark mass using template methods on dilepton events in proton antiproton collisions at $\sqrt{s} = 1.96$ -TeV,” Phys. Rev. D **73**, 112006 (2006) [arXiv:hep-ex/0602008].
- [9] J. Antos *et al.* [CDF - Run II Collaboration], “Data processing model for the CDF experiment,” IEEE Trans. Nucl. Sci. **53**, 2897 (2006) [arXiv:physics/0606042].
- [10] J. Antos *et al.*, “Data production of a large Linux PC farm for the CDF experiment,” arXiv:hep-ex/0603008.
- [11] R. Lysak [the CDF collaboration], “Top production and properties,” FERMILAB-CONF-04-377-E, Dec 2004. 4pp. Prepared for 12th International Workshop on Deep Inelastic Scattering (DIS 2004), Strbske Pleso, Slovakia, 14-18 Apr 2004. Published in *Strbske Pleso 2004, Deep inelastic scattering*, 821-824