

## Curriculum Vitae - Prof. Matthew F. Herndon

### Professional Preparation

Johns Hopkins University	Physics	Research Scientist	1998-2005
University of Maryland	Physics	Ph.D.	1998
University of Texas	Physics	B.S	1994

### Appointments

University of Wisconsin-Madison	Professor	2012-present
University of Wisconsin-Madison	Vilas Associate Professor	2012-2013
University of Wisconsin-Madison	Associate Professor	2009-2012
University of Wisconsin-Madison	Assistant Professor	2005-2009

### Significant Publications

- V. Khachatryan *et al.* [CMS Collaboration], “Measurement of the WZ production cross section in pp collisions at  $\sqrt{s} = 7$  and 8 TeV and search for anomalous triple gauge couplings at  $\sqrt{s} = 8$  TeV” *accepted by EPJC 2017*, arXiv: 1609.05721 [hep-ex].
- V. Khachatryan *et al.* [CMS Collaboration], “Measurement of the WZ production cross section in pp collisions at  $\sqrt{s} = 13$  TeV” *Phys. Lett. B* **766**, 268 (2016), arXiv: 1607.06943 [hep-ex].
- V. Khachatryan *et al.* [CMS Collaboration], “Measurement of the ZZ production cross section and  $Z \rightarrow l^+l^-l'^+l'^-$  branching fraction in pp collisions at  $\sqrt{s} = 13$  TeV” *Phys. Lett. B*, arXiv: 1607.08834 [hep-ex].
- T. Aaltonen *et al.* [CDF Collaboration], “Measurement of the production and differential cross sections of  $W^+W^-$  bosons in association with jets in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV” *Phys. Rev. D* **91**, 111101 (2015), arXiv:1505.00801 [hep-ex].
- T. Aaltonen *et al.* [CDF Collaboration], “Searches for the Higgs boson decaying to  $W^+W^-$  to  $l\nu$   $l\nu$  with the CDF II detector” *Phys. Rev. D* **88**, 052012 (2013), arXiv:1306.0023 [hep-ex].
- T. Aaltonen *et al.* [CDF Collaboration], “Search for  $B_s \rightarrow \mu^+\mu^-$  and  $B_d \rightarrow \mu^+\mu^-$  decays with the full CDF Run II data set,” *Phys. Rev. D* **87**, 072003 (2013), arXiv:1301.7048 [hep-ex].
- S. Chatrchyan *et al.* [CMS Collaboration], “Search for exotic particles decaying to WZ in pp collisions at  $\sqrt{s}=7$  TeV,” *Phys. Rev. Lett.* **109**, 141801 (2012), arXiv:1206.0433 [hep-ex].
- T. Aaltonen *et al.* [CDF Collaboration], “Measurement of the WZ Cross Section and Triple Gauge Couplings in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV,” *Phys. Rev. D* **86**, 031104 (2012), arXiv:1202.6629 [hep-ex].
- The CDF Collaboration, T. Aaltonen, et al., “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].
- The CDF Collaboration, D. Abulencia et al., “Observation of Bs Oscillations,” *Phys. Rev. Lett.* **97**, 242003 (2006), arXiv:0609040 [hep-ex].

- G. Bernardi, M. Herndon,, “Standard model Higgs boson searches through the 125 GeV discovery,” Rev. Mod. Phys. **86**, 479 (2014).
- M. Herndon,, “Higgs Boson Searches at the Tevatron,” Ann. Rev. Nucl. Part. Sci. **61**, (2011).

### Synergistic-Activities

- CMS Standard Model HL-LHC Studies Group coordinator: 2014-present, Standard Model Physics Multiboson Group leader 2012-2014
- CDF Higgs physics group leader: 2007-2008, CDF B physics group leader: 2005-2006, Leader CDF Dilepton and  $J/\psi$  physics subgroup: 2004-2005.
- Leader CDF Tracking group: 2002-2004, Leader CDF Silicon Studies group: 2001-2002, Project Leader CDF Silicon Power Supplies 1999-2005
- Participant in Quark Net Program at Johns Hopkins University. Directed high school teachers in tracking based research at CDF.
- Organizer “Multiboson Interactions (MBI) Workshop” 2014 BNL, 2015 DESY, 2016 Madison (Chair organizing committee), 2017 Karlsruhe, “Anomalous Quartic Gauge Couplings”, Dresden, Germany 2013, “Higgs Physics” session at the American Physical Society Department of Particles and Fields Meeting, Detroit, MI, 2009, Organizer “ $B_s$  Physics” session at the American Physical Society April Meeting, Jacksonville, FL, 2007, “B Physics” session at the Hadron Collider Physics Meeting, Elba, Italy, 2007, “Heavy Flavor Physics and Search for New Particles” session at the Particles and Nuclei International Conference, 2005, Santa Fe, NM.

### Collaborators & Other Affiliations

- Collaborators  
Compact Muon Solenoid(CMS) Collaboration  
Collider Detector and Fermilab(CDF) Collaboration
- Thesis & Postgraduate Advisees  
Senka Djuric: Postdoctoral Fellow: University of Wisconsin , current  
Jennifer Pursley: Postdoctoral Fellow: to Research Fellowship at Harvard Medical School  
Kenneth Long: Graduate Student: University of Wisconsin, started 2013  
William Parker: Graduate Student: University of Wisconsin, graduated 2014 to University of Maryland  
Jeff Klukas: Graduate Student: University of Wisconsin, graduated 2012, to industry  
Jason Nett: Graduate Student: University of Wisconsin, graduated 2011, to postdoc Texas A&M  
Brendt Christensen: Undergraduate Student: University of Wisconsin, (to graduate with thesis 2013), to University of Illinois Champaign Urbana  
Ryan Carbone: Undergraduate Student: University of Wisconsin, graduated with thesis 2012, to Columbia University  
David Sperka: Undergraduate Student: University of Wisconsin, graduated with thesis 2009, to Boston University, postdoc University of Florida