

Don Lincoln

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Education

Ph.D. in Physics, Rice University August 1993.
M.A. in Physics, Rice University, August 1989.
B.S. in Physics (cum laude), Rose-Hulman Institute of Technology, May 1986.
B.S. in Mathematics (cum laude), Rose-Hulman Institute of Technology, May 1986.
Attended the US Particle Accelerator School (Summers 1989, 1990, 1992).

Academic Awards and Achievements

Research Fellow, University of Michigan	1994 - 1998
Lodieska Stockbridge Vaughan Fellowship	1992 - 1993
Robert L. Chuoke Award for Outstanding Physics Graduate Student	1988
Rice Fellowship	1986 - 1987
Rice Presidential Recognition Award	1986
Member ΣΠΣ (physics honors society)	1985
Member ΠΜΕ (mathematics honors society)	1985
National Merit Scholar	1982

Academic Employment History

Scientist II	Fermi National Accelerator Laboratory	2010 - present
Scientist I	Fermi National Accelerator Laboratory	2004 - 2010
Associate Scientist	Fermi National Accelerator Laboratory	1999 - 2004
Research Associate	Fermi National Accelerator Laboratory	1998 - 1999
Research Fellow	University of Michigan	1994 - 1988
Research Assistant	Rice University	1986 - 1994

Teaching/Faculty History

Adjunct Full Professor	University of Notre Dame	2010 - present
Adjunct Associate Professor	University of Notre Dame	2005 - 2010
Adjunct Assistant Professor	North Central College	1999 - 2002
Adjunct Assistant Professor	Triton College	1993 - 1999
Lab Instructor	Rice University	1986 - 1988

Grants

Quarknet Summer Intern grant, funding 1 student (2008)
Quarknet Summer Intern grant, funding 1 teacher and four students (2004-2005)

Recent Research Efforts

- Member of CMS quark & lepton compositeness search effort.
- Co-convener of DØ QCD group [April 2008 – present].
 - 12 publications during my tenure out of 14 total QCD group publications.
 - 6 pending.
- Co-convener of DØ b-quark identification group [2007 – 2009].
 - Certified the DØ b-tagging algorithm currently used for all relevant analyses.
- Commissioning coordinator of DØ central fiber tracking detector [Early Run II].

Service to the Field

- Judge URA Thesis Award (2010 – present).
- Judge for DoE Science and Energy Research Challenge (SERCh) (2008 – present).
- Referee for Department of Energy Journal of Undergraduate Research (2003 - present).
- Referee for DoE SBIR Phase II grant proposals, April 2004.
- Referee for DoE SBIR Phase I grant proposals, March 2003.
- Referee for the journal IEEE Transactions of Nuclear Science.
- Review Committee for STAR endcap electromagnetic calorimeter and shower maximum detector, (1999 – 2001).

Recent Ph.D.s Overseen

- Ongoing**, Arnab Pal, *Search for Double Pomeron Exchange at $\sqrt{s} = 1.96$ TeV*, University of Texas at Arlington, University Adviser: Andrew Brandt.
- Ongoing**, Kayle Devaughn, *Measurement of the Dijet Mass Spectrum for b-tagged jets at $\sqrt{s} = 1.96$ TeV*, University of Nebraska, University Adviser: Greg Snow.
- 2010**, Zdenek Hubacek *Measurement of the Three-Jet Mass Spectrum at $\sqrt{s} = 1.96$ TeV*, Czech Technical University, University Adviser: Vladislav Simak.
- 2010**, Mandy Rominsky, *Measurement of the Dijet Mass Spectrum at $\sqrt{s} = 1.96$ TeV*, University of Oklahoma, University Adviser: Mike Strauss.
- 2009**, Dan Dugan, *Measurement of the Triple Differential Photon Plus Heavy-Flavor Jet Cross Section in p-pbar collisions at $\sqrt{s} = 1.96$ TeV*, Florida State University, University Adviser: Horst Wahl.
- 2008**, Mikko Voutilainen, *Measurement of the Inclusive Jet Spectrum for at $\sqrt{s} = 1.96$ TeV*, University of Nebraska/Helsinki Institute of Physics, University Adviser: Greg Snow
- 2007**, Mahsana Ahsan, *Measurement of the ratio of $W+c+jets$ cross-section to the inclusive $W+jets$ cross-section*, Kansas State University, University Adviser: Tim Bolton

Books, Popular Writing and Outreach

- Author *Fermilab Today DØ Result of the Week* and *CMS Result of the Month* (Jan 2009 – present)
- Author *The Large Hadron Collider: A New Era*, in *Analog: Science Fiction and Fact*, July 2009.
- Author of HEP popular science book *The Quantum Frontier: The Large Hadron Collider*, February 2009.
- Course developer & on-screen video presence, online teaching, Ellis College of New York Institute of Technology. Calculus based physics class. 2007-2008.
- Author of HEP popular science book *Understanding the Universe: From Quarks to the Cosmos*, May 2004. January 2005 Featured Selection of the Scientific American Book Club.
- Book proposal reviewer for World Scientific Press and Johns Hopkins University Press.
- Over 200 lectures to community and school groups, in venues ranging from 20-500.
- Over 100 colloquia and seminars to professional audiences.
- DØ tour coordinator, giving many tours myself and finding volunteers for others.
- Faculty Consultant for the physics Advanced Placement exam reading. We hand-grade the physics AP free response section (> 50,000 tests/year!) (1997 - present).
- Fermilab QuarkNet mentor (2000-2005)
- Mentor to eight students from Illinois Math and Science Academy students, introducing particle physics research to high school students (2004 – present).

Classes Taught

Predominantly first year, algebra-based physics classes (10 years.)

Recent Conferences, Seminars and Colloquia

- An Overview of Tevatron Jet Physics*, DPF, Detroit, IL, July 21-26, 2009.
Recent Jet Measurements from $D\bar{0}$, Low-x Workshop, Kolimpari, Crete, July 10, 2008.
A Survey of the Microcosm, Colloquium at the University of Manitoba, November 18, 2005.
Jet Physics at the Highest Energies, XXV Physics in Collision, Prague, Czech Republic, July 6-10, 2005.

Recent/Upcoming Public Lectures/Outreach

- The Dark Side of the Universe*, Chicago Astronomical Society, Adler Planetarium, March 2010.
Fermilab's Present and Future, lecture to 100 people attending the monthly Fermilab 'Ask a Scientist' tour, January, 2010.
Interviewed by Milt Rosenberg, WGN Radio, June 2009 & January 2010.
Tales from the Quantum Frontier: the end of the world? at the Adler Planetarium, Chicago, Illinois, November 2009.
Tales from the Quantum Frontier: the end of the world? at the Griffith Observatory, Los Angeles, California, November 2009.
Interviewed by Alan Boyle, MSNBC Chief Science Editor, March 2009.
Time, presentation at Batavia Public Library, March 2008.
The Dark Side of the Universe, Chicago Northwest Suburban Astronomers, January 2008.
What Physicists Know About the World and You Should Too, Green Bay, WI local chemistry professors, October 2007.
Interviewed on *The Race for the Higgs* for Swedish Public Television, October 8 2007

Recent Papers I Wrote or to Which I Contributed Significantly

- Jet Measurements at the Tevatron*, to be published in *Ann. Rev. Nucl. Part. Sci.*
Determination of the Strong Coupling Constant from the Inclusive Jet Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV, *Phys. Rev. D* **80**, 111107 (2009).
Measurement of differential $Z + jet + X$ cross sections in $ppbar$ collisions at $\sqrt{s} = 1.96$ TeV, *Phys. Lett. B* **678**, 45 (2009).
Measurement of the triple differential photon plus heavy-flavor jet cross section in $ppbar$ collisions at $\sqrt{s} = 1.96$ TeV, *Phys. Rev. Lett.* **102**, 192002 (2009), Dan Dugan Ph.D. Thesis.
Measurement of the ratio of the $pp \rightarrow W+c$ -jet cross-section to the inclusive $pp \rightarrow W+jets$ cross-section, *Phys. Lett. B* **666**, 23 (2008), Mahsana Ahsan Ph.D. Thesis.
Measurement of the Inclusive Jet Cross Section in pp Collisions in $D\bar{0}$ Run II at $\sqrt{s} = 1.96$ TeV, *Phys. Rev. Lett.* **101**, 062001 (2008), Mikko Voutilainen Ph.D. Thesis.
Measurement of the $pp \rightarrow tt$ production cross section at $\sqrt{s} = 1.96$ TeV in the fully hadronic decay channel, *Phys. Rev. D* **76** 072007 (2007), Freya Bleckman Ph.D. Thesis.
The Upgraded $D\bar{0}$ Detector, *Nucl. Instrum. Meth. A* **565** 463 (2006).
Measurement of the tt production cross section in pp collisions at $\sqrt{s} = 1.96$ TeV using secondary vertex b tagging, *Phys. Rev. D* **74** 112004 (2006).
Jets at the Highest Energies (Jets at $D\bar{0}$ and CDF), *AIP Conf. Proc.* **815** 210 (2006).

Full publication list available upon request.