Curriculum Vitae

Reinhard Schwienhorst

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University education

- 2000 PhD - Physics, University of Minnesota, Minneapolis, Minnesota
  Thesis Title: A New Upper Limit for the Tau-Neutrino Magnetic Moment
  Thesis Advisor: Professor Roger Rusack
- 1995 Physik Diplom, Westfälische Wilhelms Univerität Münster, Germany
  Diplom Title: Elektron-Photon Korrelationen in der Elektronenstossionisation
  Diplom Advisor: Professor Karl Blum

Positions held

- Professor, Michigan State University, since 2017.
- Associate Professor, Michigan State University, 2012 to 2017.
- Visiting Professor at LPSC Grenoble, France, 2014 to 2015.
- Assistant Professor, Michigan State University, 2006 to 2012.
- Visiting Lecturer, Université de Provence, Aix-Marseille, France, June 2008.
- Research Associate, Michigan State University, 2000 to 2005.
- Research Associate, University of Minnesota, 2000.
- Research Assistant, University of Minnesota, 1997 to 2000.
- Teaching Assistant, University of Minnesota, 1995 to 1997.

Awards/Fellowships

- CERN Scientific Associate, 2017 to 2018.
- US ATLAS Scholar, visiting Argonne National Laboratory, 2015 to 2016.
- College of Natural Sciences Teacher-Scholar award at MSU, 2012.
- NSF CAREER award in 2010.
- Thomas H. Osgood Memorial Faculty Teaching Award at MSU, 2008.
- Tollestrup award for a postdoctoral research project, Fermilab, 2005.
- Graduate School Fellowship, University of Minnesota, 1998.
- Teaching Assistant recognition award, University of Minnesota, 1996.

Teaching

I strive to improve student learning and to enhance the student experience in every course that I teach. At MSU, I have introduced assessment testing (in the form of pre- and post-test) to every class I have taught, including upper-level courses and labs. I flipped the upper-level/grad-level course on particle physics. When teaching large lecture courses, I rely on clicker questions and similar interactive tools to monitor student understanding in lectures. I also maintain TA manuals for every course that I teach, not

only lab courses but also lecture courses where TAs mainly spend time in the help room. This ensures that all teaching assistants and undergraduate learning assistants start from the same place and the helproom experience is consistent for students. I continue to improve my teaching methodology continuously, updating procedures each time based on assessment testing and feedback.

- Elementary Particle Physics (PHY 493/803), a course for upper-level undergrads and interested graduate students. I changed the style of the class to flipped-classroom.
- Physics for Scientists & Engineers 1&2 (PHY 183&184), a large lecture class.
- Undergraduate Physics Laboratory I and II (PHY 251, 252), a large lab course.
- Electronics (PHY 440), lectures and labs for about 30 juniors and seniors in Physics.
- Grader for the subject exams for graduate students.

Students

- Thesis adviser to Sarah Heim and Weigang Geng (both graduated in 2012); Brad Schoenrock (graduated 2016); Kuan-Yu Lin (graduated 2021); Jason Gombas (graduating 2025); Hieu Le (graduating 2025).
    - Heim won a MSU Tracy Hammer award and a CNS dissertation completion fellowship and NSF student at CERN support.
    - Geng won a French Eiffel fellowship to spend 1 year at CPPM in France.
    - Lin won a US-ATLAS fellowship at Argonne National Lab.
    - Heim and Lin have gone on to careers in particle physics.
    - Several of the students have won fellowships at MSU.
- Thesis committee member and co-supervisor for several other students, at MSU and other institutions
    - Visiting PhD students Peng Ge (graduated 2014) and Rui Yuan (graduated 2022).
- Supervisor of many undergraduate students.
    - Several undergrads working with me have won a MSU Physics Hantel research Fellowship or a CNS Dean's research scholar award.
    - I am emphasizing diversity in hiring undergrads, especially for the muon tube construction project, where a third are under-represented minorities and a third are women.

Research

I am exploring the energy frontier, studying the laws of nature at the highest energies. My interest is the top quark, which is a key to the fundamental understanding of our universe. I study top quark electroweak interactions, and in particular its connection to electroweak symmetry breaking and new physics. In the past, I focused on electroweak production of single top quark events at the Tevatron and the LHC. More recently, I am looking for new physics in top-quark final states and measurements of four-top production. I am also studying the top-quark physics potential of future colliders, HL-LHC and FCC.

- ATLAS experiment at the LHC at CERN, 2006 – present.
    - Measurement of four-top-quark production and searches for new physics in the four-top final state (since 2022).
        - For the BSM paper, I am an editor, grad student Rongqian Qian is an analysis contact. Postdoc Binbin Dong is analysis contact for the cross-section measurement with Run 3 data.

- Searches for a new heavy boson W' in the third-generation final state (tb) (since 2016)
    - Grad students Kuan-Yu Lin and Rui Yuan were INT note editors, Lin and postdoc Hector De la Torre was analysis contact, and I was editor.
- LHC top working group co-convener (2018-2020)
- Top group co-convener (2016-2018)
- Single top quark physics, SM measurements and new physics searches in single top final states. Single top convener 2011 to 2012.
- Member of the top LHC working group since 2014, single top combinations (2014-2017) and common Top MC for ATLAS and CMS (2022)
- Searches for new heavy bosons Z' decaying to leptons (2012) and to *b*-quarks (2016)
- Editor for many internal notes, conference notes and ATLAS publications.
- Editorial board chair and editorial board member for many top and Higgs analyses.
- Member of the ATLAS speakers bureau, planning, assigning and reviewing all ATLAS conference talks (2024-2026).
- Member of US ATLAS analysis support panel (2014-2016), organizing and reviewing presentations, and chair of the 2014 search committee to find the next US ATLAS deputy physics support manager.
- Risk Manager for the US-ATLAS Phase-II upgrade project (since 2024).
- Deliverable manager for phase 2 muon sMDT upgrade project (since 2016).
- Level 3 manager for fiber plant phase 1 upgrade project, funded by DOE (2014-2020).
- L1Calo on-call expert in summer 2010, many shift leader and trigger shifts.
- ATLAS Team leader for MSU since 2012.

- Future colliders
    - Top-quark studies for HL-LHC and FCC-hh and contributing to the European Strategy update (2025).
    - Muon detector studies for the European Strategy update (2025).
    - Responsible for muon drift detectors for the US Higgs Factory planning effort (since 2024).
- Phenomenological top quark studies (2004 – present).
    - Co-convener of the top quark and heavy flavor production group for the Snowmass 2021 effort to plan the future of US HEP.
    - Snowmass 2021 contribution on top quark mass and parton distribution functions.
    - Member of the CTEQ group since 2019. Organizer of the 2023 fall CTEQ meeting at MSU.
    - Co-convener of the top quark working group for the Snowmass 2013 effort to plan the future of US HEP.
    - Single top at NLO calculations and phenomenological studies for Tevatron and LHC, several phenomenology papers between 2006 and 2013.
    - New physics models in single top and supersymmetry, several papers.
    - Snowmass 2013 studies on single top SM and new physics production.
- D0 experiment at the Tevatron at Fermilab, 2000 – present.
    - Single top quark physics, searches for new physics in single top. Single top convener at two different times, responsible for Tevatron combinations.
    - L2 Trigger, initially responsible for commissioning and operations.

- Neutrino physics as part of my PhD studies. I was a member of the MINOS and DONUT collaborations.

DEI/Culture contributions and Outreach

- Under my guidance, the colloquium committee in Physics&Astronomy at MSU has added more emphasis on recruiting an inclusive group of speakers and leaders that represent the diversity of people and interests in the department. Especially in 2022/23, we have worked with the Spartan chapter of the NBSP to bring in several highly visible minority speakers.
- We place an emphasis on excellent, engaging speakers. This has paid off by having very interesting talks from a diverse set of speakers.
- Muon sMDT production is being done by undergrads from physics, engineering, and other majors at MSU. The group of about 25 students changes every year, about a third are international students and another third are under-represented minorities. About 1/3 of the students are female.
- Every conference that I have organized has emphasized inclusivity and diversity in speakers and included code of conduct guidelines for all attendees.
- Planetarium show development.
    - Relics of the Big Bang, traditional planetarium show on the LHC and the ATLAS experiment (2011). I was the executive producer.
    - Phantom of the Universe, full-dome planetarium show, in collaboration with LBNL and UTA and others (2016). I am one of three executive producers.
    - Planetarium show development with undergrads in the Comm Arts college at MSU.
    - Several special showings of Phantom of the Universe, including at Dennos Museum in Traverse City in September 2023.
- Various other outreach projects, public talks, panel discussion member.
    - MSU science festival event in 2014 with virtual visit to CERN.
    - Public presentations in connection with the planetarium show and with the "Particle Fever" movie.
    - Visits to elementary school to present particle physics and the LHC at CERN (with Nathan Whitehorn, who brings a cloud chamber), as well as different forms of energy and their application (each year since 2022).
    - Organizer and presenter for particle physics outreach day at Dennos Museum Center in Traverse City in September 2023 in connection with the top workshop Top2023.
    - I have started working with two high school students who contacted me after watching the planetarium show Phantom of the Universe (since 2024). They are learning basic particle physics phenomenology and tools.

Service at MSU and in HEP

- 2025: Co-organizer of the CTEQ summer school, which takes place for the first time at MSU in East Lansing, Michigan.
- 2024: member of the international organization committee for the Top Quark workshop Top2024.
- 2023: Organizer of the CTEQ Fall meeting in East Lansing, Michigan.
- 2023: Co-chair of the local organizing committee for the Top Quark workshop Top2023 in Traverse City, Michigan.

- 2023: Co-organizer of the DIS conference in East Lansing, Michigan.
- 2023: Co-organizer of the top quark sessions at the LHCP meeting in Belgrade, Serbia.
- 2023-2025: Member of the advisory committee to the department chair (Adcom).
- 2022: Chair of the International Advisory Committee for the Top Quark workshop Top2022 in Durham, UK.
- 2021: Chair of the local organizing committee for the Top Quark workshop Top2021 (zoom).
- 2020-2023: Member (chair in 2022) of the US ATLAS nomination committee.
- 2019: Co-organizer of the Top Precision Physics workshop at Fermilab.
- 2019: Co-organizer of the Physics session at the US ATLAS workshop at UMass Amherst.
- Since 2018: Chair of the colloquium committee in PA at MSU.
- 2016 and 2017: Organizer of two workshops on new physics interpretations at the LHC, first chair and then organizing committee member.
- 2015 – 2019: Advisory board member for QuarkNet.
- 2014 – present: Member of the LHC top working group.
- 2014: Chair of the calculus-based undergrad intro physics committee in PA at MSU.
- Since 2013: Team leader for the MSU team on the ATLAS experiment at CERN.
- 2012-2014: Member of the advisory committee to the department chair (Adcom).
- 2012-2013: Co-chair of the top quark working group for Snowmass 2013.
- 2012: Heavy flavor session co-organizer for the DIS meeting in Bonn, Germany.
- 2005 – present: member of various D0 and ATLAS analysis review committees.
- 2011: LHC Physics session chair at the NAS China-US Kavli symposium in Shenzhen, China.
- 2011 – present: Reviewer for Nucl. Instr. Methods A.
- 2011 – present: Reviewer of NSF and DOE proposals.
- 2011: Top quark session organizer for the DPF meeting in Providence, RI.
- 2009 – 2013: Graduate quantum mechanics exam committee at MSU.
- 2007: Co-chair of the organizing committee for the DØ workshop at MSU.
- 2006 – 2009: Undergraduate teaching committee at MSU.
- 2006 – present: Reviewer for Phys. Rev. Lett and Phys. Rev. D.
- 2006: Chair of the single top quark session at the APS meeting in Dallas, Texas.
- 2005 – 2011: DØ authorship committee.

Organizations

- American Physical Society (since 1996).
- American Association for the Advancement of Science (since 2005).
- American Association of Physics Teachers (since 2007).

Publications

My full list of publications can be found in spires (http://www.slac.stanford.edu/spires/hep/) through "find a Schwienhorst"; in ISI (http://apps.isiknowledge.com) by looking for author "Schwienhorst R"; and in ADSABS (http://adsabs.harvard.edu/abstract_service.html) by looking for author "Schwienhorst". Below I list publications that I have contributed to directly.

ATLAS publications and conference notes

- *Differential measurement of the WbWb production in the dilepton channel using full Run 2 data*, ATLAS Collaboration, to be submitted to JHEP (EB chair).
- *Measurement of tt cross-section and tt/Z cross-section ratio at sqrt(s) = 13.6 TeV,* ATLAS Collaboration, Phys. Lett. B 848 (2024) 138376, arXiv:2308.09529 (EB chair).
- *Single-top t-channel production cross-section at sqrt(s) = 5.02 TeV,* ATLAS Collaboration, Phys. Lett. B 854 (2024) 138726, arXiv:2310.01518 (2023) (EB member).
- *Measurement of the t\bar{t} production cross-section in pp collisions at sqrt{s}=5.02 TeV with the ATLAS detector,* ATLAS Collaboration, JHEP 06 (2023) 138 (EB chair).
- *Measurement of tt cross-section and tt/Z cross-section ratio at sqrt(s) = 13.6 TeV,* ATLAS Collaboration, Phys. Let. B 848 (2024) 138376 (EB chair).
- *Search for vector-boson resonances decaying into a top quark and a bottom quark using pp collisions at sqrt{s} = 13 TeV with the ATLAS detector*, ATLAS Collaboration, JHEP12(2023)073 (Contact editor, analyzer, student supervisor).
- *Search for vector boson resonances decaying to a top quark and a bottom quark in the hadronic final state using pp collisions at √s=13 TeV with the ATLAS detector,* ATLAS Collaboration, ATLAS-CONF-2021-043 (2021) (editor, analyzer, student supervisor).
- *Measurement of the ttbar production cross-section in the lepton+jets channel at sqrt{s}=13 TeV with the ATLAS experiment*, ATLAS Collaboration, Phys. Lett. B 810 (2020) 135797 (EB chair).
- *Combinations of single-top-quark production cross-section measurements and |Vtb| determinations at √s 7 and 8 TeV with the ATLAS and CMS experiments*, ATLAS and CMS collaborations, JHEP 05 (2019) 088 (Contact editor, main analyzer).
- *Search for W' to tb decays in the hadronic final state using pp collisions at sqrt{s}=13 TeV with the ATLAS detector*, ATLAS Collaboration, Phys. Lett. B 781 (2018) 327 (analyzer, student supervisor).
- *Search for a resonance decaying to a top and a b in the 1 lepton final state*, ATLAS Collaboration, Phys. Lett. B 788 (2019) 347 (analyzer, student supervisor).
- *Search for W→tb in the in the all-hadronic final state in √s = 13 TeV pp collision with the ATLAS Detector*, ATLAS Collaboration, ATLAS-CONF-2017-082 (2017) (analyzer, student supervisor).
- *Measurements of top-quark pair differential cross-sections in the lepton+jets channel in pp collisions at √s=13 TeV using the ATLAS detector*, ATLAS Collaboration, JHEP 11 (2017) 191 (EB member).
- *Measurements of top-quark pair differential cross-sections in the lepton+jets channel in pp collisions at √s=8 TeV using the ATLAS detector*, ATLAS Collaboration, Eur. Phys. J. C76 (2016) 538, arXiv:1511.04716 (EB chair).

- *Search for resonances in the mass distribution of jet pairs with one or two jets identified as b-jets with the ATLAS detector with 2015 and 2016 data*, ATLAS Collaboration, ATLAS-CONF-2016-060 (2016).
- *Search for resonances below 1.2 TeV from the mass distribution of b-jet pairs in proton-proton collisions at √s=13 TeV with the ATLAS detector*, ATLAS Collaboration, ATLAS-CONF-2016-031 (2016).
- *Combination of cross-section measurements for associated production of a single top-quark and a W boson at √s = 8 TeV with the ATLAS and CMS experiments*, ATLAS and CMS Collaborations, ATLAS-CONF-2016-023 (2016) (Main analyzer, contact editor).
- *Study of correlation of PDF uncertainty in single top and top pair production at the LHC*, ATLAS Collaboration, ATL-PHY-PUB-2015-010 (2015) (reviewer).
- *Measurement of the production cross-section of a single top quark in association with a W boson at 8 TeV with the ATLAS experiment*, ATLAS collaboration, JHEP 1601 (2016) 064, arXiv:1510.03752 (analyzer, contact editor).
- *Search for the production of single vector-like and excited quarks in the Wt final state in pp collisions at s√ = 8 TeV with the ATLAS detector,* ATLAS collaboration, JHEP 1601 (2016) 110, arXiv:1510.02664 (analyzer, contact editor)
- *Combination of cross-section measurements for associated production of a single top-quark and a W boson at √s =8 TeV with the ATLAS and CMS experiments*, ATLAS and CMS collaborations, ATLAS-CONF-2014-052 (2014) (Main analyzer, contact editor).
- *Measurement of the cross-section for associated production of a top quark and a W boson at √s =8 TeV with the ATLAS detector*, ATLAS collaboration, ATLAS-CONF-2013-100 (2013) (analyzer, contact editor).
- *Search for single b*-quark production with the ATLAS detector at √s = 7 TeV*, ATLAS collaboration, Phys. Lett. B 721 (2013) 171-189, arXiv:1301.1583 (2012) (analyzer, contact editor)
- *Measurement of t-Channel Single Top-Quark Production in pp Collisions at √s = 8 TeV with the ATLAS detector*, ATLAS collaboration, ATLAS-CONF-2012-132 (2012) (analyzer).
- *Evidence for the associated production of a W boson and a top quark in ATLAS at √s = 7 TeV*, ATLAS collaboration, Phys. Lett. B 716 (2012) 142-159 (2012) (analyzer).
- *Search for high-mass resonances decaying to dilepton final states in pp collisions at a center-of-mass energy of 7 TeV with the ATLAS detector*, ATLAS collaboration, arXiv:1209.2535 (2012) (analyzer, editor)
- *Search for dilepton resonances in pp collisions at sqrt(s) = 7 TeV with the ATLAS detector,* ATLAS collaboration, CERN-PH-EP-2011-123, arXiv:1108.1582 [hep-ex], Phys. Rev. Lett. 107 272002 (2011) (analyzer, editor)
- *Measurement of the t-channel Single Top-Quark Production Cross Section in 0.70fb-1 of pp Collisions at sqrt(s) = 7 TeV with the ATLAS detector*, ATLAS Collaboration (editors: Schwienhorst & Wagner), ATLAS-CONF-2011-101 (2011) (analyzer, editor)
- *Search for tb resonances in proton-proton collisions at √s = 7 TeV with the ATLAS detector*, ATLAS collaboration, Phys.Rev.Lett. 109 (2012) 081801 (2012).
- *Search for s-Channel Single Top-Quark Production in Collisions at sqrt(s) = 7TeV*, ATLAS single top working group including Schwienhorst, ATLAS note ATLAS-CONF-2011-118 (2011).

- *Search for W+t single-top events in the dileptonic channel at ATLAS,* ATLAS single top working group incl. Schwienhorst, ATLAS note ATLAS-CONF-2011-104 (2011).
- *Measurement of the t-channel Single Top-Quark Production Cross Section in 0.70fb^-1 of pp Collisions at sqrt(s) = 7 TeV with the ATLAS detector*, ATLAS single top working group, editor Schwienhorst, ATLAS note ATLAS-CONF-2011-101 (2011).
- *Search for high mass dilepton resonances in pp collisions at s√=7 TeV with the ATLAS experiment*, ATLAS Collaboration, Phys.Lett. B700 163-180, arXiv:1103.6218 [hep-ex] (2011).
- *Observation of t Channel Single Top-Quark Production in pp Collisions at sqrt(s)=7TeV with the ATLAS detector*, ATLAS single top working group incl. Schwienhorst, ATLAS note ATLAS-CONF-2011-088 (2011).
- *Searches for Single Top-Quark Production with the ATLAS Detector in pp Collisions at sqrt(s) = 7TeV,* ATLAS single top working group including Schwienhorst, ATLAS note ATLAS-COM-CONF-2011-026 (2011).
- *Measurement of the top quark-pair production cross section with ATLAS in pp collisions at sqrt{s}=7TeV*, ATLAS Collaboration, Eur.Phys.J. C71, 1577, arXiv:1012.1792 (2010).
- *Performance of the ATLAS Detector using First Collision Data.* Atlas Collaboration, JHEP 1009, 056, arXiv:1005.5254 [hep-ex] (201).
- *Expected Performance of the ATLAS Experiment - Detector, Trigger, and Physics*, ATLAS Collaboration, CERN-OPEN-2008-020, arXiv:0901.0512 [hep-ex] (2009).
- *The ATLAS experiment at the CERN Large Hadron Collider*, ATLAS Collaboration, JINST 3:S08003 (2008).

DØ Run II publications

- *Combination of D0 measurements of the top quark mass*, D0 Collaboration, arXiv:1703.06994 (2017) (reviewer).
- *Tevatron combination of single-top-quark cross sections and determination of the magnitude of the Cabibbo-Kobayashi-Maskawa matrix element Vtb*, CDF and D0 Collaborations, submitted to Phys. Rev. Lett, arXiv:1503.05027 (2015) (analyzer, editor).
- *Observation of s-channel production of single top quarks at the Tevatron*, CDF and D0 Collaborations, Phys. Rev. Lett. 112, 231803, arXiv:1402.5126 (2014) (analyzer, editor).
- *Evidence for s-channel single top quark production in pp collisions at √s=1.96 TeV*, D0 Collaboration, Phys. Lett. B726, 656, arXiv:1307.0731 (2013) (analyzer, editor).
- *An improved determination of the width of the top quark*, D0 Collaboration, Phys. Rev. D 85, 091104 (2012) (analyzer, editor).
- *Combination of Searches for Anomalous Top Quark Couplings with 5.4 fb−1 of pp Collisions*, Phys. Lett. B 713, 165 (2012) (analyzer, editor).
- *Search for anomalous Wtb couplings in single top quark production in ppbar collisions at sqrt(s) = 1.96 TeV*, D0 Collaboration, Phys.Lett. B708, 21-26, arXiv:1110.4592 [hep-ex] (2012).
- *Measurements of single top quark production cross sections and |Vtb| in pp collisions at sqrt{s}=1.96TeV,* D0 Collaboration, Phys.Rev. D84 112001, arXiv:1108.3091 [hep-ex] (2011).

- *Model-independent measurement of t-channel single top quark production in pp collisions at √s=1.96 TeV,* D0 Collaboration, Phys.Lett. B705 313-319, arXiv:1105.2788 [hep-ex] (2011).
- *Search for flavor changing neutral currents in single top quark production using 2.3fb-1 of p-pbar collisions,* D0 Collaboration, Phys. Lett. B693, 81*,* Fermilab-Pub-10-203-E, arXiv:1006.3575 [hep-ex] (2010).
- *Determination of the Width of the Top Quark*, D0 Collaboration, Phys. Rev. Lett. 106, 022001, arXiv.org:1009.5686 (2011).
- *Search for single top quarks in the tau+jets channel using 4.8fb-1 of p-pbar collision data,* D0 Collaboration, Phys. Lett. B690: 5-14*,* Fermilab-Pub-09-610-E, arXiv:0912.1066 [hep-ex] (2009).
- *Measurement of the t-channel single top quark production cross section,* D0 Collaboration, Phys. Lett. B682, 363-369*,* Fermilab-Pub-09-372-E, arXiv:0907.4259 [hep-ex] (2009).
- *Observation of single top quark production,* D0 Collaboration, Phys. Rev. Lett. 103, 092001*,* Fermilab-Pub-09-056-E, arXiv:0903.0850 [hep-ex] (2009).
- *Search for anomalous top quark couplings with the D0 detector,* D0 Collaboration, Phys. Rev. Lett. 102, 092002*,* Fermilab-Pub-08-583-E, arXiv:0901.0151 [hep-ex] (2009).
- *Search for anomalous Wtb couplings in single top quark production,* D0 Collaboration, Phys. Rev. Lett. 101, 221801*,* Fermilab-Pub-08-235-E, arXiv:0807.1692 [hep-ex] (2008).
- *Search for charged Higgs bosons decaying to top and bottom quarks in p anti-p collisions,* D0 Collaboration, *submitted to* Phys. Rev. Lett.*,* Fermilab-Pub-08-229-E, arXiv:0807.0859 [hep-ex] (2008).
- *Search for W-prime resonances decaying to a Top Quark and a Bottom Quark*, DØ collaboration, Phys. Rev. Lett. 100: 211803 arXiv:0803.3256 [hep-ex] (2008).
- *Search for production of single top quarks via flavor-changing neutral currents at the Tevatron,* D0 Collaboration, Phys. Rev. Lett. 99, 191802*,* Fermilab-Pub-07-031-E*, hep-ex/*0702005 (2007).
- *Evidence for production of single top quarks and first direct measurement of |Vtb|,* D0 Collaboration, Phys. Rev. Lett. 98, 181902*,* Fermilab-Pub-06-475-E*, hep-ex/*0612052 (2007).
- *Search for W' boson production in the top quark decay channel*, DØ collaboration, Phys. Lett. B 641: 423-431 (2006), Fermilab-Pub-06-069-E, hep-ex/0607102 (2006).
- *Search for single top quark production in ppbar collisions at sqrt(s)=1.96TeV*, DØ collaboration, Phys. Rev. D75, 092007, Fermilab-Pub-06-069-E, hep-ex/0604020 (2006).
- *Search for single top quark production in ppbar collisions at sqrt(s)=1.96TeV*, DØ collaboration, Phys. Lett. B 622, 265, Fermilab-Pub-05-207-E, hep-ex/0505063 (2005).
- *Measurement of the ttbar Production Cross Section in ppbar Collisions at sqrt{s} = 1.96 TeV using Kinematic Characteristics of Lepton + Jets Events*, DØ collaboration, Phys. Lett. B626, 45, Fermilab-Pub-05-079-E, hep-ex/0504043 (2005).
- *Measurement of the ttbar Production Cross Section in ppbar Collisions at sqrt{s} = 1.96 TeV using Lepton + Jets Events with Lifetime b-tagging*, DØ collaboration, Phys. Lett. B 626, 35, Fermilab-Pub-05-087-E, hep-ex/0504058 (2005).
- *Measurement of the W helicity in top quark decays*, DØ collaboration, Phys. Rev. D 72, 011104, Fermilab-Pub-05-187-E, hep-ex/0505031 (2005).

- *Measurement of the ttbar production cross section in ppbar collisions at sqrt(s) = 1.96 TeV in dilepton final states*, DØ collaboration, Phys. Lett. B 626, 55, Fermilab-Pub-05-217-E, hep-ex/0505082 (2005).
- *The Upgraded D0 Detector,* DØ collaboration, Nucl. Instrum. Meth. A **565**, 463, hep-ex/0507191, Fermilab-Pub-05-341-E (2006).

General top quark physics publications

- *Planning the Future of U.S. Particle Physics (Snowmass 2013): Chapter 3: Energy Frontier*, R. Brock et al., arXiv:1401.6081 (2014).
- *Snowmass 2013 Top quark working group report*, Agashe et al., arXiv:1311.2028 (2013).
- *Heavy Flavour Working Group Summary*, J. Brodzicka, M. Corradi, I. Schienbein, R. Schwienhorst, proceedings for the DIS conference, arXiv:1208.3379 (2012).
- *Combination of CDF and D0 Measurements of the Single Top Production Cross Section,* Tevatron Electroweak Working Group, for the CDF and D0 collaborations*,* Fermilab-TM-2440-E*,* arXiv:0908.2171 [hep-ex] (2009).
- *Tevatron-for-LHC Report: Top and Electroweak Physics,* C Gerber et al.*,* Fermilab-Conf-07-052, arXiv:0705.3251 [hep-ph] (2007).

Particle physics phenomenology

- *Focus topics for the ECFA study on Higgs / Top / EW factories,* Jorge de Blas, Patrick Koppenburg, Jenny List, Fabio Maltoni, Juan Alcaraz Maestre et al., arXiv: 2401.07564 [hep-ph] (2024) (contributor).
- *Using Machine Learning to Improve PDF Uncertainties,* Jason P. Gombas, Reinhard Schwienhorst, Binbin Dong, Jarrett Fein, e-Print: 2401.13050 [hep-ph] (Top2023 conference proceedings, supervisor).
- *Future Top Quark Pole Mass Improvements from PDF Updates,* Jason Gombas, Reinhard Schwienhorst, Jarrett Fein, Sara Sawford, arXiv:2308.02689 [hep-ph] (DIS conference proceedings, supervisor).
- *The Future of US Particle Physics - The Snowmass 2021 Energy Frontier Report,* Meenakshi Narain, Laura Reina, Alessandro Tricoli, et al., arXiv: 2211.11084 [hep-ex] (contributor).
- *Report of the Topical Group on Top quark physics and heavy flavor production for Snowmass 2021,* Reinhard Schwienhorst (ed.), Doreen Wackeroth (ed.) et al., arXiv: 2209.11267 [hep-ph] (editor, contributor).
- *Dependence of the top-quark mass measured in top-quark pair production on the parton distribution functions at the LHC and future colliders* Jason Gombas, Reinhard Schwienhorst, Jarrett Fein, Sara Sawford, arXiv:2203.08064 [hep-ph] (analyzer, editor, student supervisor).
- *Single Top Production as a Probe of Heavy Resonances*, E. Drueke et al, Phys.Rev. D91 (2015) 5, 054020, arXiv:1409.7607 (2014).
- *Deconstructed transverse mass variables,* A. Ismail, R. Schwienhorst, J. Virzi, D. Walker, Phys.Rev. D91 (2015) 7, 074002, arXiv:1409.2868 (2014).
- *Searches for resonances in the tb and tc final states at the high-luminosity LHC, Snowmass2013 contribution*, E. Drueke et al., arXiv:1309.7043 (2013).

- *Single top quark cross section measurement in the t-channel at the high-luminosity LHC, Snowmass2013 contribution*, B. Schoenrock et al., arXiv:1309.7043 (2013).
- *Single top production as a probe of B' quarks*, J. Nutter, R. Schwienhorst, D. Walker, J. Yu, Phys. Rev. D86 (2012) 094006, arXiv:1207.5644 [hep-ex] (2012).
- *Next-to-leading order QCD corrections to t-channel single top quark production and decay at the LHC*, Reinhard Schwienhorst, Q.-H. Cao, C.-P. Yuan, C. Mueller, Phys. Rev. D83: 034019, arXiv:1012.5132 [hep-ph] (2011).
- *Next-to-leading order QCD corrections to s-channel single top quark production and decay at the LHC*, Sarah Heim, Qing-Hong Cao, Reinhard Schwienhorst, C.-P. Yuan, Phys. Rev. D81, 0340005, arXiv:0911.0620 [hep-ph] (2010).
- *The SM and NLO Multileg Working Group: Summary report*, SM and NLO Multileg Working Group at the 2009 Les Houches meeting, arXiv:1003.1241 [hep-ph] (2010).
- *Next-to-Leading Order Corrections to Single Top Quark Production and Decay at Tevatron: 2. t-channel Process*, Qing-Hong Cao, Reinhard Schwienhorst, J. Benitez, R. Brock, C.-P. Yuan, Phys. Rev. D72, 094027, hep-ph/0504230 (2005).
- *Next-to-Leading Order Corrections to Single Top Quark Production and Decay at Tevatron: 1. s-channel Process*, Qing-Hong Cao, Reinhard Schwienhorst, C.-P. Yuan, Phys. Rev. D74, 054023, hep-ph/0409040 (2005).

ATLAS conference proceedings

- *Selected topics from single top Wt and s-channel production*, R. Schwienhorst, for the ATLAS and CMS collaborations, proceedings for the LHCP conference, St. Petersburg, Russia, 2015.
- *Selected topics from top mass measurements at the Tevatron*, R. Schwienhorst, for the CDF and D0 collaborations, proceedings for the LHCP conference, St. Petersburg, Russia, 2015.
- *The Phase-1 Upgrade of the ATLAS First Level Calorimeter Trigger*, R. Schwienhorst, for the ATLAS collaboration, proceedings for the TWEPP conference, Lisbon, Portugal (2015).
- *Bringing the LHC to a planetarium* R. Schwienhorst, proceedings for the ICATPP conference, 2013.
- *Top Cross-Sections and Single Top*, R. Schwienhorst, for the ATLAS and CDF and CMS and D0 collaborations, proceedings for the Physics in Collisions conference, 2013, arXiv:1403.0513.
- *Single top quark production with ATLAS*, ATLAS collaboration (R. Schwienhorst, for the collaboration), proceedings for the physics at the LHC conference 2011, arXiv:1110.2192 [hep-ex] (2011).
- *Bringing ATLAS to a regional planetarium*, R. Schwienhorst, proceedings for the DPF meeting 2011, arXiv:1109.2839 (2011).

DØ Run II conference proceedings

- *Selected topics from top mass measurements at the Tevatron*, R. Schwienhorst, for the CDF and D0 collaborations, proceedings for TOP 2017, Olomouc, Czech Republic, 2016.
- *Selected topics from top mass measurements at the Tevatron*, R. Schwienhorst, for the CDF and D0 collaborations, proceedings for the LHCP conference, St. Petersburg, Russia, 2015.

- *Single top quark production at the Tevatron,* DØ collaboration (R. Schwienhorst, for the collaboration), proceedings for the Moriond EW conference 2014, arXiv:1405.2732 (2014).
- *Single top quark production and Vtb at DØ*, DØ collaboration (R. Schwienhorst, for the collaboration), proceedings for the DPF meeting 2011, arXiv:1109.2826 (2011).
- *Single top quark production and Vtb at the Tevatron*, DØ collaboration (R. Schwienhorst, for the collaboration), proceedings for the Rencontres de Blois conference 2010, FERMILAB-CONF-10-397-E, arXiv:1009.5629 (2010).
- *Observation of Single Top Production with the D0 Detector*, DØ collaboration (R. Schwienhorst, for the collaboration), proceedings for the EPS-HEP conference 2009, FERMILAB-PUB-09-371-PPD, arXiv:0908.4553 (2009).
- *Single Top Production at the Tevatron*, DØ and CDF collaborations (R. Schwienhorst, for the collaborations), proceedings for the 43 Rencontres de Moriond on Electroweak Interactions and Unified Theories, FERMILAB-CONF-08-129-E, arXiv:0805.2175 (2008).
- *The DØ Run II Trigger System*, DØ collaboration (R. Schwienhorst, for the collaboration), Int. J. Mod. Phys. A20: 3796-3798, proceedings for the Meeting of the Division of Particles and Fields of the American Physical Society, physics/0411135 (2004).
- *Search for Single Top Production at the Tevatron*, DØ and CDF collaborations (R. Schwienhorst, for the collaborations), proceedings for the 5th Rencontres du Vietnam, DØ note 4631, FERMILAB-CONF-04-331-E, hep-ex/0411039 (2004).
- *Top Quark Production Cross Section at ECM=1.96TeV*, DØ and CDF collaborations (R. Schwienhorst, for the collaborations), proceedings for the 5th Rencontres du Vietnam, DØ note 4632, FERMILAB-CONF-04-332-E, hep-ex/0411041 (2004).
- *Update of the Measurement of the t anti-t cross section as S**(1/2)=1.96 TeV*, DØ collaboration (V Abazov et al.), Fermilab-Conf-03-248-E, (2003).
- *Measurement of the t anti-t cross section at square-root s=1.96 TeV*, DØ collaboration (V Abazov *et al.*), Fermilab-Conf-03-200-E (2003).

Review articles

- *Single top quark production at the LHC and the Tevatron*, A. Giammanco and R. Schwienhorst, Rev. Mod. Phys. 90 (2018) 3, 035001
- *Search for single top quark production at DØ*, R. Schwienhorst, Mod. Phys. Lett. A 21, pp. 1339-1353 (2006).

Other publications

- *A High-Precision, Fast, Robust, and Cost-Effective Muon Detector Concept for the FCC-ee,* C. Luci, J. Qian et al. (including Schwienhorst), input to the European Strategy for Particle Physics – 2026 update, https://indico.cern.ch/event/1439855/contributions/6461545/ (2025).
- *Exploring Dark Matter: A Phantom of the Universe,* R. Michael, Kaushik De, Reinhard Schwienhorst, DOI: 10.1142/9789811207402_0020 (2020) (conference proceedings, producer).

- *Phantom of the Universe: A Planetarium Show about Dark Matter,* Michael R. Barnett, Kaushik De, R. Schwienhorst, PoS ICHEP2016 (2016), 331 (conference proceedings, producer).
- *Colliding neutrino beams,* R. Schwienhorst, Mod. Phys. Lett. A23: 2751-2761 arXiv:0708.0160 (2008).
- *Final tau neutrino results from the DONUT experiment,* K. Kodama *et al.* (DONUT Collaboration), Phys. Rev. D78: 052002 (2008).
- *A first measurement of the interaction cross-section of the tau neutrino,* K. Kodama *et al.* (DONUT Collaboration), submitted to Phys. Rev. D (2008).
- *Identification of neutrino interactions using the DONUT spectrometer,* K. Kodama *et al.* (DONUT Collaboration), Nucl. Instrum. Meth. A **516**: 21-33 (2004).
- *Detection and Analysis of Tau Neutrino Interactions in Donut Emulsion Target*, K. Kodama *et al.* (DONUT Collaboration), Nucl. Instrum. Meth. A **493**: 45-66 (2002).
- *A New Upper Limit for the Tau-Neutrino Magnetic Moment*, R. Schwienhorst *et al.* (DONUT Collaboration), Phys. Lett. B **513**: 23-29 (2001).
- *Observation of tau neutrino interactions*, K. Kodama *et al.* (DONUT Collaboration), Phys. Lett. B **504**: 218-224 (2001).
- *A New Upper Limit for the Tau-Neutrino Magnetic Moment*, R. Schwienhorst, Ph.D. thesis, University of Minnesota, FERMILAB-THESIS-2000-14 (2000).
- *The Magnetized steel and scintillator calorimeters of the MINOS experiment,* MINOS collaboration, Nucl. Instrum. Meth. A**596**: 190-228 (2008).
- *Observation of muon neutrino disappearance with the MINOS detectors and the NuMI neutrino beam,* MINOS collaboration, Phys. Rev. Lett.97: 191801 (2006).
- *First Observations of Separated Atmospheric Muon Neutrino and Muon Anti-Neutrino Events in the MINOS Detector*, MINOS collaboration, Phys. Rev. D73: 072002 (2006).
- *A large liquid scintillator detector for a long baseline neutrino oscillation experiment*, P. Border, P. Cushman, K. Heller, D. Maxam, J.K. Nelson, K. Ruddick, R. Rusack, R. Schwienhorst, T. Berg, T. Chase, M. Hansen, C. Bower, R. Hatcher, R. Heinz, L. Miller, S. Mufson (Minnesota U. & Indiana U.), Nucl. Instrum. Meth. A **463**: 194-204 (2001).
- *A comprehensive characterization of Hamamatsu 16- and 64-anode PMTs*, K. Lang et al., Nucl. Instrum. Meth. A**461**: 571-573 (2001).
- *Multipixel Photodetectors*, R. Schwienhorst *et al.*, Numi-L-370 (1998).
- *Results from an Iron Proportional Tube Calorimeter Prototype,* P. Schoessow *et al.*, In *Tucson 1997, Calorimetry in high energy physics* 319-326, SLAC-REPRINT-1997-070, ANL-HEP-CP-98-02, NUMI-L-335 (1997).
- *Electron-photon coincidences in electron impact ionization-excitation*, R Schwienhorst et al., J. Phys. B: At. Mol. Opt. Phys. **29** 2305-2314 (1996).
- *R-matrix calculations for double-differential cross-sections in electron-impact ionization of helium*, Schwienhorst R, Raeker A, Reid RHG and Bartschat K, J. Phys. B: At. Mol. Opt. Phys. **28** 4651-4658 (1995).

Conference presentations

Invited conference presentations

- *Top results and modelling at the LHC,* QCD@LHC conference, Stony Brook, NY *(9/2025)*.
- *Common Monte Carlo for top pair production*, open LHCtopWG meeting (11/2022).
- *Overview of ATLAS and CMS physics results*, PHENO2022 conference, Pittsburgh, PA (5/2022).
- *Snowmass top and heavy flavor production*, presentation at the ECFA workshop on future colliders (4/2022).
- *Experimental summary*, Top2020 workshop, online (9/2020).
- *Introduction and workshop goals*, Top precision workshop, Fermilab (5/2019).
- *Tevatron top quark mass measurements*, TOP2016 conference, Olomouc, Czech Republic (9/2016).
- *Single top Wt production*, LHC top working group meeting, CERN (5/2016).
- *New physics interpretations at the LHC*, conference organizer, Argonne National Laboratory & MSU (5/2016).
- *ATLAS L1 Calorimeter Trigger Upgrades*, TWEPP conference, Lisbon, Portugal (09/2015).
- *Selected topics in single top Wt and s-channel production*, LHCP conference, St. Petersburg, Russia (09/2015).
- *Selected topics in top quark mass measurements at the Tevatron*, LHCP conference, St. Petersburg, Russia (09/2015).
- *Single top turns six*, Top At Twenty conference, Fermilab (04/2015).
- *Single top Wt combination and theory uncertainties*, Top LHC working group meeting, CERN (01/2015).
- *Physics at the HL-LHC*, overview presentation at the Enigmass meeting, Annecy, France (11/2014).
- *Single top quark production at the Tevatron*, Moriond EW 2014, La Thuile, Italy (3/2014).
- *Particle physics outreach with a planetarium*, 14th ICATPP Conference on
- Astroparticle, Particle, Space Physics and Detectors for Physics Applications, Como, Italy (9/2013).
- *Top quark production at the LHC and the Tevatron*, Physics in Collisions, Beijing, China (9/2013).
- *Tevatron physics*, SLAC summer institute, Stanford, CA (7/2013).
- *Top quark production with ATLAS*, US ATLAS workshop plenary talk, Ann Arbor, MI (8/2012).
- Heavy flavor sessions co-organizer at the Deep Inelastic Scattering meeting in Bonn, Germany (2012).
- Physics session chair and introductory session speaker at the Kavli Symposium of the National Academy of Sciences and the Chinese Academy of Sciences, Shenzhen, China (2011).
- Top quark session organizer at the meeting of the Division of Particles and Fields of the American Physical Society, Providence, RI (2011).
- *Bringing ATLAS and the LHC to a regional planetarium*, meeting of the Division of Particles and Fields of the American Physical Society, Providence, RI (8/2011).

- *Single Top Quark Physics at D0*, meeting of the Division of Particles and Fields of the American Physical Society, Providence, RI (8/2011).
- *Single Top Quark Physics with ATLAS*, physics at the LHC conference, Perugia, Italy (6/2011).
- *Single Top Production and Vtb at the Tevatron*, 22nd Rencontres de Blois conference, Blois, France (7/2010).
- *Observation of Single Top Quark Production with the D0 Detector*, HEP-EPS conference, Krakow, Poland (7/2009).
- *Single top quark production*, invited talk at the Moriond EW conference, La Thuile, Italy (3/2008).
- *Neutrino Colliders*, invited talk at the Aspen conference on electroweak symmetry breaking, Aspen, Colorado (1/2008).
- *Top quark pair production and single top quark production*, invited talk at the CTEQ LHC workshop, Kalamazoo, Michigan (5/2007).
- *Single Top Production at the Tevatron,* plenary talk at the APS meeting, Dallas, Texas (4/2006).
- *Single Top: From the Tevatron to the LHC*, plenary talk at the TeV4LHC workshop, Batavia, Illinois (10/2005).
- *Search for Single Top Quark Production at DØ,* presented at the Fermilab Users Meeting when I received the Tollestrup award, Batavia, IL (6/2005).
- *Top Physics Working Group Summary,* plenary talk at the TeV4LHC workshop, Brookhaven, New York (3/2005).
- *Single Top Physics at the Tevatron,* presented at the TeV4LHC workshop, Fermilab, Batavia, Illinois (9/2004).
- *Search for Single Top Production at the Tevatron*, presented at the 5th Rencontres du Vietnam, Hanoi, Vietnam (8/2004).
- *Top Quark Production at E_{CM}=1.96TeV*, presented at the 5th Rencontres du Vietnam, Hanoi, Vietnam (8/2004).
- *The DØ Run II Trigger System*, presented at the DPF meeting in Riverside, California (8/2004).
- *Top Quark Pair Production Cross Section at DØ in the Lepton+Jets Channel*, presented at the DPF meeting in Philadelphia, Pennsylvania (4/2003).

Other presentations

- *Risk management*, DOE IPR of ATLAS Phase-II upgrade, Brookhaven (3/2025).
- *Risk overview*, DOE IPR of ATLAS Phase-II upgrade, Brookhaven (2/2024).
- *Muon sMDT project*, NSF Rebaseline review of ATLAS Phase-II upgrade, Nevis Lab, NY (4/2023), as well as director's review in3/2023.
- *Single top quark measurements at the Tevatron and the LHC*, Lomonosov conference online presentation (8/2021).
- Organizer, session convener and presenter of several talks for the Snowmass 2021 meeting in Seattle, WA (7/2022) and several preparation meetings (2020-2022).
- Muon sMDT tube overview, MSU site visit by US-ATLAS management (1/2020).
- Muon sMDT management and technical, NSF FDR (9/2019).
- Muon sMDT overview, NSF PDR (1/2018).

- Muon sMDT construction, NSF conceptual design review of the ATLAS High-Luminosity LHC upgrade project, Arlington, VA (03/2016).
- FEX optical plant, CD2/3 review of US ATLAS Phase 1 upgrades, Brookhaven (9/2014).
- Planetarium show planning meeting presentation of MSU fulldome clip, Arlington, TX (10/2013).
- Organizer, session convener and presenter of several talks for the Snowmass 2013 meeting on the Mississippi (8/2013) and several preparation meetings.
- *FEX fiber-optic plant*, CD1 review of US ATLAS Phase 1 upgrades, Fermilab (6/2013).
- *Top quark physics overview*, Community Planning Meeting (CPM2012) for Snowmass, Fermilab (10/2012).
- ATLAS single top workshop organizer and introductory speaker (12/2011).
- *Searches for new particles in single top*, presented at the ATLAS new particle workshop (11/2011).
- *Top Quark Anomalous Couplings*, presented at the APS meeting in Denver, CO (5/2009).
- *Neutrino colliders*, presented at the APS meeting in St. Louis, MO (4/2008).
- *Search for new physics in single top quark production*, presented at the APS meeting in Jacksonville, Florida (4/2007).
- *Multivariate Classifier comparison*, presented at the Birs conference on statistical inference problems in High Energy Physics and Astronomy in Banff, Canada (7/2006).
- *Search for W' boson production in the top quark decay channel*, presented at the Phenomenology Symposium 2006 in Madison, Wisconsin (5/2006).
- *Measurement of B(t→Wb)/B(t→Wq) at DØ*, presented at the APS meeting in Dallas, Texas (4/2006).
- *Search for Single Top Quark Production at DØ in Run II*, presented at the Phenomenology Symposium 2005 in Madison, Wisconsin (5/2005).
- *Single Top Interactions at DØ in the Electron Channel*, presented at the Phenomenology Symposium 2004 in Madison, Wisconsin (4/2004).
- *A New Upper Limit for the Tau-Neutrino Magnetic Moment*, presented at the New Perspectives conference, Fermilab, Batavia, Illinois (6/2000).
- *A New Upper Limit for the Tau Neutrino Magnetic Moment*, presented at the APS April Meeting in Long Beach, California (4/2000).
- *The MINOS experiment*, presented at the New Perspectives conference, Fermilab, Batavia, Illinois (6/1997).

Seminar and colloquium presentations

- Presentation to the MSU Society of Physics Students on *Hadron Collider Physics*
- *Present and Future* (11/2023).
- Presentation on *Top quark mass studies at the LHC and future colliders* to the MSU Snowmass research group (10/2021).
- Presentation to the MSU Society of Physics Students on *LHC in Run 2 and beyond* (2/2021).
- Seminar on *Single top quark* physics at Peking University in Beijing, China (11/2019).

- Colloquium on *The Tevatron legacy and the LHC through the lens of single top-quark production*, University of Minnesota, Minneapolis, MN (2/2019).
- Public presentation for *Phantom of the Universe*, Abrams Planetarium, MSU (4/2017).
- Astronomical Horizons lecture on *LC in Run 2 and beyond*, Michigan State University (3/2017).
- Colloquium on *New physics in top at the LHC*, Michigan State University, MI (11/2016).
- Seminar on *New physics with top quarks in Run II at the LHC and beyond*, University of Pittsburgh, PA (4/2016).
- Presentation to the MSU SPS on *Physics at the LHC in Run 2 and beyond* (2/2016).
- Seminar on *New physics with top quarks in Run II at the LHC and beyond*, LPC Clermont-Ferrand, France (7/2015).
- *Phantom of the Universe* presentation to the Grenoble Astronomical Society (3/2015).
- Presentation on *Physics at the High-luminosity LHC*, LPSC Grenoble, France (12/2014).
- Seminar on *Top quark couplings today and tomorrow*:
  Shandong University, China (5/2014),
  SJTU, Shanghai, China (5/2014).
- Seminar on *Observation of s-channel single top quark production:*
  Fermilab Wine & Cheese Seminar, Batavia, Illinois (2/2014).
- Presentation on LHC physics to MSU Science Theater (3/2012).
- Seminar on *Single Top Quark Physics at the Tevatron and the LHC*:
  Elementary particle physics seminar, Shandong University, Jinan, China (11/2011),
  HEP seminar, USTC, Hefei, China (11/2011),
  HEP seminar, IHEP, Beijing, China (11/2011),
  Teilchenphysikseminar, Aachen, Germany (7/2011),
  Dienstagsseminar, Bonn, Germany (7/2011),
  Elementarteilchenseminar, Wuppertal, Germany (6/2011).
- Seminar on *Observation of single top quark production at the Tevatron:*
  Astro/HEP seminar, University of Michigan, Ann Arbor, MI (12/2009),
  Particle and Astrophysics Seminar, ETH Zürich, Switzerland (9/2009),
  Seminar Elementarkräfte und mathematische Grundlagen, Universität Mainz, Germany (7/2009),
  DESY Seminar, Zeuthen, Germany (6/2009),
  LHEP Seminar, Bern, Switzerland (5/2009).
- Seminar on *Observation of single top quark production with D0:*
  Physik 2 Oberseminar, Universität Mainz, Germany (10/2009),
  CPPM Seminar, Marseille, France (6/2009),
  LPSC Seminar, Grenoble, France (6/2009).
- Seminar on *Single top quark physics at the Tevatron:*
  LAL Orsay seminar, Orsay, France (7/2008),
  Séminaire SPP, Saclay, France (6/2008).
- Colloquium on *Top Quark Physics*:
  Ball State University, Muncie, Indiana (2/2008),
  University of Virginia, Charlottesville, Virginia (11/2007).
- Seminar on *Advanced Analysis methods in HEP:*
  CPPM Seminar, Marseille, France (6/2008).

CPPM Seminar, Marseille, France (7/2007).

- Seminar on *Evidence for single top quark production with the DØ experiment:*
  LPNL Seminar, Lyon, France (7/2007),
  LPSC Seminar, Grenoble, France (7/2007),
  Michigan State University, East Lansing, MI (1/2007).
- Colloquium on *Top Quark Physic*
  University of Illinois at Chicago, Illinois (3/2006),
  University of California, Santa Cruz (2/2006),
  Michigan State University REU students, East Lansing, Michigan (6/2006).
- Seminar on *Tevatron Single Top Quark Physics:*
  University of Massachusetts, Amherst, Massachusetts (3/2006),
  University of California, Berkeley, California (3/2006),
  University of British Columbia, Vancouver, Canada (1/2006),
  Michigan State University, East Lansing, Michigan (1/2006),
  University of Chicago, Chicago, Illinois (1/2006).
- Seminar on *Advanced Analysis methods in HEP:*
  Brookhaven National Laboratory Particle Seminar, Upton, New York (12/2005),
  Boston University, Boston, Massachusetts (12/2005).
- Seminar on *Tevatron Single Top Physics:*
  Harvard University, Boston, Massachusetts (12/2005),
  University of Illinois at Chicago (11/2005),
  University of Minnesota, Minneapolis, Minnesota (11/2005).
- Colloquium on *Physics in the Third Generation: Testing the Standard Model at the Energy Frontier*:
  University of Minnesota, Minneapolis, Minnesota (11/2005).
- Seminar on *Single Top Quark Physics at DØ in Run II:*
  University of Wisconsin, Madison, Wisconsin (10/2005).
- Colloquium on *Physics in the Third Generation: Testing the Standard Model at the Energy Frontier*:
  Drake University, Des Moines, Iowa (1/2005),
  Northern Illinois University, De Kalb, Illinois (5/2005).
- Seminar on *Search for Single Top Quark Production at DØ in Run II:*
  Florida State University, Tallahassee, Florida (5/2005),
  Columbia University, New York, New York (4/2005).
- Seminar on *Search for Single Top Quark Production at DØ in Run II:*
  Fermilab Wine & Cheese Seminar, Batavia, Illinois (4/2005).
- Seminar on *Search for Single Top Quark Production at DØ in Run II*:
  Simon Fraser University, Burnaby, B.C., Canada (11/2004),
  University of Washington, Seattle, Washington (11/2004),
  University of Illinois at Chicago (11/2004),
  University of Illinois at Urbana-Champaign (11/2004).
- Seminar on *Single Top Physics at DØ:*
  Michigan State University, East Lansing, Michigan (4/2004).
- Seminar on *Observation of Tau Neutrino Interactions:*
  Michigan State University, East Lansing, Michigan (7/2000).
- Seminar on *Statistical Analysis of Systematic Errors and small Signals:*
  University of Minnesota (10/1999).
- Seminar on *The DONUT experiment*:

DOE review talk at the University of Minnesota (7/1999).

- Seminar on *Search for the Tau Neutrino Magnetic Moment:* Nagoya University, Nagoya, Japan (6/1999).
- Seminar on *Search for Neutrino Oscillations – MINOS:* University of Minnesota, Minneapolis, Minnesota (4/1998).