

## CHRIS QUIGG · SEMINARS

- [1078] January 18–20, 2021: Physics@Veldhoven 2021: *The Magic of Physics*, Keynote to the Focus Session, *Journeys through the Zeptouniverse: Particle Physics and the Quest for a New Standard Model*.
- [1077] September 2, 2020: Physics 290E Seminar, University of California, Berkeley, “Paths to the Electroweak Theory”
- [1076] May 4, 2020: Münchner Physik (Tele)Kolloquium, “A Century of Noether’s Theorem”
- [1075] January 28, 2020: Physics & Astronomy Colloquium, The Ohio State University, “A Century of Noether’s Theorem”
- [1074] January 28, 2020: Special Seminar, The Ohio State University, “Perspectives and Questions”
- [1073] November 20, 2019: Theory Seminar, Jefferson Laboratory, “Perspectives and Questions”
- [1072] November 8, 2019: *Lattice QCD at Fermilab: Celebrating the Career of Paul Mackenzie*, Fermilab, “Quarkonium Off & On the Lattice”
- [1071] November 5, 2019: Nuclear / Particle / Astrophysics Seminar, Yale University, “Perspectives and Questions”
- [1070] November 4, 2019: Physics Club Colloquium, Yale University, “A Century of Noether’s Theorem”
- [1069] October 30, 2019: Special Colloquium, NIKHEF, Amsterdam, “A Century of Noether’s Theorem”
- [1068] October 29, 2019: Special Colloquium, NIKHEF, Amsterdam, “Beauty at High Precision / High Sensitivity”
- [1067] October 25, 2019: *Deciphering Strong-Interaction Phenomenology through Precision Hadron Spectroscopy*, Munich Institute for Astro- and Particle Physics (MIAPP), “Three topics in heavy-hadron spectroscopy” DOI: 10.5281/zenodo.3519834
- [1066] September 30, 2019: BEAUTY<sub>2019</sub>, Ljubljana (Slovenia), Opening Lecture, “Beauty at High Precision / High Sensitivity” DOI: 10.5281/zenodo.3468910
- [1065] August 23, 2019: Joint Experimental Theoretical Seminar, Fermilab, “Perspectives and Questions” DOI: 10.5281/zenodo.3376597
- [1064] May 13, 2019: University of Chicago High-Energy Physics Seminar, “Perspectives and Questions: Meditations on the Future of Particle Physics”
- [1063] April 14, 2019: American Physical Society April Meeting, Denver, *Honoring Leon Lederman*, “In Leon’s company, it seemed that anything might be possible” DOI: 10.5281/zenodo.2638482
- [1062] April 2, 2019: Séminaire commun LPTENS/LPTHE, École normale supérieure, Paris, “Perspectives and Questions: Meditations on the Future of Particle Physics”
- [1061] March 14, 2019: Leon Lederman Public Lecture, Illinois Institute of Technology, “Dream Machines,” DOI: 10.5281/zenodo.2595230
- [1060] March 5, 2019: Experimental Seminar, SLAC National Accelerator Laboratory, “A Century of Noether’s Theorem,” DOI: 10.5281/zenodo.2585371
- [1059] October 30, 2018: Energy Frontier Working Group, Fermilab, “Dream Machines”

- [1058] October 11, 2018: Compact Muon Spectrometer Weekly General Meeting, CERN, “Perspectives and Questions” DOI: 10.5281/zenodo.1458237
- [1057] October 1, 2018: *The Future of Particle Physics: A Quest for Guiding Principles*, Karlsruhe Institute of Technology, “Introduction to *The Future of Particle Physics* (KIT Edition)” DOI: 10.5281/zenodo.1442410
- [1056] August 15, 2018: Fermilab Colloquium, “A Century of Noether’s Theorem” DOI: 10.5281/zenodo.1346275 and video
- [1055] May 31, 2018: Simons Center for Geometry and Physics Workshop, Stony Brook: Exotic Hadrons and Flavor Physics, “Stable Tetraquarks” and video
- [1054] April 20, 2018: NIKHEF Informal Seminar, Amsterdam, “Stable Tetraquarks”
- [1053] April 20, 2018: NIKHEF Colloquium, Amsterdam, “I would like to know . . .”
- [1052] April 10, 2018: Precision Science Workshop, Fermilab, “Physics Beyond Colliders @ CERN”
- [1051] April 4, 2018: *Nico van Kampen Colloquium in Theoretical Physics*, University of Utrecht, “Stable, doubly heavy tetraquark mesons” DOI: 10.5281/zenodo.1210601
- [1050] March 17–24, 2018: *LIII Rencontres de Moriond* session devoted to QCD and High Energy Interactions, La Thuile, Italy, “Stable Tetraquarks” DOI: 10.5281/zenodo.1204622
- [1049] March 11, 2018: University of Michigan *Foundations of Modern Physics* Working Group Workshop, *Particle Physics after the Discovery of the Higgs Boson*, “I would like to know . . .” DOI: 10.5281/zenodo.1196663
- [1048] December 12, 2017: Theoretical Physics Seminar, Fermilab, “Report on CERN’s *Physics Beyond Colliders* Annual Workshop” DOI: 10.5281/zenodo.1117970
- [1047] November 3, 2017: Joint Physics / High Energy Physics Colloquium, Argonne National Laboratory, “Fermilab’s Greatest Hits: Scientific Highlights from the First Fifty Years”
- [1046] October 23, 2017: Strong Interaction Seminar, Technische Universität München, “Stable, Doubly Heavy Tetraquark mesons” DOI: 10.5281/zenodo.1123474
- [1045] October 20, 2017: Physikalisches Kolloquium, Universität Heidelberg, “The Future(s) of Particle Physics” DOI: 10.5281/zenodo.1123481
- [1044] August 2, 2017: 2017 Meeting of the Division of Particles and Fields of the American Physical Society, Fermilab, “Fermilab’s Greatest Hits: Scientific Highlights of the First Fifty Years” DOI: 10.5281/zenodo.1120397
- [1043] June 1, 2017: Canadian Association of Physicists Annual Congress, Queen’s University, “Perspectives and Prospects for Particle Physics”
- [1042] June 1, 2017: Canadian Association of Physicists Annual Congress, Queen’s University, “J. D. Jackson, Physicist, Teacher, Citizen” DOI: 10.5281/zenodo.1120336
- [1041] February 27, 2017: CERN–EPFL–Korea Theory Institute: *New Physics at the Intensity Frontier*, “The *Project X* Physics Study at Fermilab”
- [1040] January 27, 2017: Fermilab Auditorium Lecture, Batavia, “Fermilab’s Greatest Hits: Highlights from the First Fifty Years” DOI: 10.5281/zenodo.1137821 and video
- [1039] December 9, 2016: Journées Pierre Fayet, École Normale Supérieure, Paris, “Neutrinos from the Great Beyond”

- [1038] October 24, 2016: Erwin Schrödinger Colloquium, Universität Zürich, “What Quarkonium Taught Me about the Schrödinger Equation, and vice versa”
- [1037] October 5, 2016: Joint Maryland–Johns Hopkins High-Energy Physics Seminar, University of Maryland, “Looking Ahead after ICHEP 2016”
- [1036] September 26, 2016: *J. D. Jackson: Physicist, Teacher, Citizen*, Lawrence Berkeley National Laboratory, “A Little Tour in Dave Jackson’s Research”
- [1035] September 15, 2016: Theoretical Physics Seminar, Fermilab, “Report on CERN’s *Physics Beyond Colliders* Workshop”
- [1034] August 30, 2016: LHC Physics Center *Topic of the Week*, Fermilab, “Looking Ahead after ICHEP 2016”
- [1033] August 26, 2016: Closing Lecture, *Multi-Boson Interactions 2016*, University of Wisconsin–Madison, “Impressions of MBI 2016”
- [1032] June 3, 2016: Yale University Class of 1966 Fiftieth Reunion Forum, “Life in the Nanonoworld: The Quest for the Higgs Boson”
- [1031] January 18, 2016: Opening Lecture, Symposium on Future Colliders, Hong Kong University of Science and Technology, “Scientific Overview”
- [1030] September 30, 2015: Physics Colloquium, Wichita State University, “Particle Physics in a Season of Change”
- [1029] June 25, 2015: Symposium Symmetries and Phases in the Universe 2015, Kloster Irsee, “High-Energy Collider Physics Overview”
- [1028] May 13, 20, 29, 2015: Short course, Laboratoire de Physique Théorique, École Normale Supérieure & Laboratoire de Physique Nucléaire et de Hautes Énergies, Jussieu, “Large Hadron Collider Physics: The Next Generation” (three talks)
- [1025] May 8, 2015: Colloquium, Instituto de Física Corpuscular, Valencia, “Celebrating Quarkonium: The First Forty Years”
- [1024] May 6, 2015: Séminaire Exceptionnel, Laboratoire de Physique Théorique, École Normale Supérieure & Laboratoire de Physique Nucléaire et de Hautes Énergies, Jussieu, “Celebrating Quarkonium: The First Forty Years”
- [1023] March 27, 2015: Hagopian Family Endowment Colloquium, Florida State University, “Particle Physics in a Season of Change”
- [1022] March 26, 2015: Special Seminar, Florida State University, “Celebrating Quarkonium: The First Forty Years”
- [1021] March 2, 2015: Les Rencontres de Physique de la Vallée d’Aoste, La Thuile, “Quarkonium: The First Forty Years”
- [1020] February 24, 2015: Carl Friedrich von Siemens Foundation Lecture, Munich, “The World According to Higgs”
- [1019] February 21, 2015: Arbeitstreffen Kernphysik, Schleching, “Celebrating Quarkonium: The First Forty Years”
- [1018] January 19, 2015: Hong Kong University of Science & Technology Jockey Club Institute for Advanced Study *Symposium on the Future of High Energy Physics*, “Perspectives at the Energy Frontier”

- [1017] January 4, 2015: American Association of Physics Teachers Winter Meeting, San Diego, *The Higgs and My Classroom*, “Why the Higgs Boson Matters”
- [1016] December 3, 2014: Colloquium, Fermilab, “Celebrating Quarkonium: The First Forty Years”
- [1015] November 11, 2014: PH Seminar, CERN, “Celebrating Quarkonium: The First Forty Years”
- [1014] September 26, 2014: Tufts University Physics & Astronomy Colloquium, “Particle Physics in a Season of Change”
- [1013] September 10, 2014: University of Delaware Physics & Astronomy Colloquium, “Particle Physics in a Season of Change”
- [1012] August 11–15, 2014: Joint CERN–Fermilab Hadron Collider Physics School, Fermilab, “The Standard Model of Particle Physics” (four lectures)
- [1008] July 21–25, 2014: Winter School of the Gleb Wataghin Physics Institute, University of Campinas, Brazil, “Introduction to Particle Physics” (five lectures)
- [1003] June 3, 2014: *TASI 2014* Public Lecture, Boulder, “The World According to Higgs”
- [1002] June 2–4, 2014: *TASI 2014: Journeys through the Precision Frontier: Amplitudes for Colliders*, “The Standard Model of Particle Physics,” three lectures
- [999] April 11–12, 2014: 50 Years of Quarks & Color, University of Maryland, “Electroweak Symmetry Breaking: Status and Prospects”
- [998] April 7, 2014: Institute of Physics Joint High Energy Particle Physics and Astro Particle Physics Groups Annual Meeting, Royal Holloway, University of London, “125-GeV Higgs, What Next?”
- [997] February 27, 2014: Physics Colloquium, Lehigh University, “Particle Physics in a Season of Change”
- [996] February 14, 2014: *Future Circular Collider Study Kickoff Meeting*, University of Geneva, “Perspectives at the Energy Frontier”
- [995] January 24, 2014: Seminar, Universität Zürich, “The Higgs Boson for the Masses?”
- [994] January 23, 2014: Seminar, Eidgenössische Technische Hochschule, Zürich, “Particle Physics in a Season of Change”
- [993] January 21, 2014: Seminar for Boston University / CERN / UniGenève Undergraduates, CERN, “The Higgs Boson for the Masses?”
- [992] December 4, 2013: Advanced Photon Source Colloquium, Argonne National Laboratory, “The Higgs Boson for the Masses?”
- [991] September 18, 2013: Physics Colloquium, University of Bern, “Particle Physics in a Season of Change”
- [990] September 9, 2013: Special Universe Lecture, Excellence Cluster *Origin and Structure of the Universe*, Munich, “The Higgs Boson for the Masses?”
- [989] August 4, 2013: *Snowmass 2013* Panel Discussion, Minneapolis, “What should be the balance in the US program between domestic and overseas facilities?”
- [988] July 10–15, 2013: *Invisibles* School, Institute of Particle Physics Phenomenology, Durham University, “Physics of the Large Hadron Collider,” two lectures

- [986] April 26, 2013: DIS2013, Marseille, “DIS and Beyond”
- [985] April 18, 2013: 41st Annual Llewellyn G. Hoxton Lecture for the General Public, University of Virginia Department of Physics, “The World According to Higgs”
- [984] April 12, 2013: Fermilab Auditorium Lecture, “The World According to Higgs”
- [983] April 4, 2013: Special Mathematical Physics Colloquium, Universidade da São Paulo, “Particle Physics in a Season of Change”
- [982] April 1–6, 2013: ICTP South American Institute for Fundamental Research School, Particle Physics in the LHC Era, São Paulo, “The Standard Model—Its Magic and Its Shortcomings,” five lectures
- [977] March 25, 2013: University of Michigan High-Energy Physics – Astrophysics – Nuclear Physics Seminar, “Neutron–Antineutron Oscillations”
- [976] March 11, 2013: Aspen Winter Physics Conference, *Higgs Quo Vadis*, “Higgs Perspectives”
- [975] February 15, 2013: Annual Meeting, American Association for the Advancement of Science, Symposium: *Is Beauty Truth? Mathematics in Physics from Dirac to the Higgs Boson and Beyond*, “Particle Physics in a Season of Change”
- [974] January 23, 2013: Seminar for BU/CERN/UniGenève Undergraduates, CERN, “The Higgs Boson for the Masses?”
- [973] November 14, 2012: *Accelerators for a Higgs Factory: Linear vs. Circular (HF2012)*, “Physics Potential of a Higgs Factory”
- [972] October 26, 2012: Physics Colloquium, Technical University Dortmund, “Particle Physics in a Season of Change”
- [971] October 12, 2012: Xth Quark Confinement and the Hadron Spectrum, Garching, “Beyond Confinement”
- [970] July 23, 2012: Opening Lecture, 40th SLAC Summer Institute, “Historical Perspective”
- [969] July 16, 2012: Screening and Panel Discussion, Higgs Boson Discovery Explained with *The Atom Smashers*, Landmark Century Center Cinema, Chicago
- [968] June 11, 2012: Invited Lecture, *Tevatron Impact*, Fermilab, “The Tevatron’s Impact on Particle Physics”
- [967] April 4, 2012: Colloquium, Fermilab, “The Higgs Boson for the Masses?”
- [966] February 2, 2012: Conférence publique, Conférence inaugurale de l’Institut de Physique Théorique «Philippe Meyer», “Les révolutions à venir en physique des particules”
- [965] February 1, 2012: Conférence inaugurale de l’Institut de Physique Théorique «Philippe Meyer», “Particle Physics in a Season of Change”
- [964] January 25, 2012: Seminar for BU/CERN/UniGenève Undergraduates, CERN, “Particle Physics in a Season of Change”
- [963] January 3–6, 2012: Nordic Winter Meeting, Gausdal, Norway, “Potential Discoveries at the Large Hadron Collider” (three lectures)
- [960] December 1, 2011: Physics Colloquium, Tsinghua University, Beijing, “Particle Physics in a Season of Change”

- [959] November 14, 2011: Opening Lecture, Hadron Collider Physics Symposium, Paris, “Particle Physics in a Season of Change”
- [958] October 31, 2011: Colloquium, MIT Laboratory for Nuclear Studies, “Particle Physics in a Season of Change”
- [957] October 27, 2011: High Energy Physics Advisory Panel, Washington, “A Tevatron Collider Retrospective”
- [956] September 16, 2011: NIKHEF Colloquium, Amsterdam, “Particle Physics in a Season of Change”
- [955] September 15, 2011: NIKHEF Theory Seminar, Amsterdam, “Topics in Hadronic Physics”
- [954] September 8, 2011: Discovery Colloquium, Niels Bohr Institute, Copenhagen, “Particle Physics in a Season of Change”
- [953] June 17, 2011: Concluding Talk, *Hadron 2011*, Munich, “The Future of Hadrons”
- [952] May 7, 2011: Invited Talk, USCMS Collaboration Meeting, University of Notre Dame, “The Art of the Public Lecture”
- [951] May 6, 2011: Public Lecture, University of Notre Dame, “The Coming Revolutions in Particle Physics”
- [950] May 1, 2011: April Meeting of the American Physical Society, Anaheim, J. J. Sakurai Prize Address, “The Boundless Horizons of Supercollider Physics”
- [949] April 20, 2011: Physics Colloquium, Prague Technical University, “The Coming Revolutions in Particle Physics”
- [948] April 5, 2011: Physics Colloquium, Brookhaven National Laboratory, “The Coming Revolutions in Particle Physics”
- [947] April 1, 2011: Invited Talk, Jonathan Rosner Symposium, University of Chicago, “Jon the Quantum Mechanic”
- [946] March 21–25, 2011: Spring School on the Philosophy of Particle Physics, Maria in der Aue, Germany, “The Standard Model of Particle Physics and Its Problems” (three lectures)
- [943] March 20, 2011: XLVIth Rencontres de Moriond: *Electroweak Interactions and Unified Theories*, La Thuile, “Theoretical Summary”
- [942] February 7–11, 2011: XVI Escola de Verão Jorge André Swieca de Partículas e Campos, “Potential Discoveries at the Large Hadron Collider” (five lectures)
- [937] January 24, 2011: Seminar for BU/CERN/UniGe Undergraduates, CERN, “The Coming Revolutions in Particle Physics”
- [936] December 30, 2010: Renaissance Weekend, Charleston, “The World’s Most Powerful Microscopes”
- [935] December 17, 2010: Symposium on the 25th Anniversary of First  $\bar{p}p$  Collisions at the Tevatron, Fermilab, “Theory for the Tevatron Collider: The First 25+ Years” (with John Campbell)
- [934] December 2, 2010: Physics Department Colloquium, Arizona State University, “The Coming Revolutions in Particle Physics”

- [933] November 18, 2010: Public Lecture, 2010 Meeting of the Prairie Section of the American Physical Society and Chicago Section of the American Association of Physics Teachers, Illinois Institute of Technology, “The Coming Revolutions in Particle Physics”
- [932] November 10, 2010: University of Chicago/Argonne/Fermilab Joint Speaker Event, *Ethics in Science*, Unity Temple: panelist
- [931] October 30, 2010: Guest Lecture, US LHC User’s Organization Annual Meeting, “Mapping the New Worlds”
- [930] October 20, 2010: Universe Cluster Colloquium, Munich, “The Coming Revolutions in Particle Physics”
- [929] October 15, 2010: Physikalisches Kolloquium, Universität Bonn, “The Coming Revolutions in Particle Physics”
- [928] October 9, 2010: Flavour Physics: Strong Dynamics, Rare Decays and New Phenomena, Lake Starnberg, “Light, Liberty, and the Pursuit of Unity-ness”
- [927] September 28, 2010: Solvay Colloquium, Université Libre de Bruxelles, “The Coming Revolutions in Particle Physics”
- [926] September 8, 2010: EuroFlavour2010, Munich, “Future Approaches to Flavour Physics”
- [925] July 20, 2010: XXII Rencontres de Blois: Particle Physics and Cosmology, Concluding Talk, “Highlights and Perspectives”
- [924] May 13, 2010: Cross Talk, Fermilab, “Conceptual Issues in Particle Physics”
- [923] April 6, 2010: LHC Physics Center Seminar, Fermilab, “Learning to See at the LHC”
- [922] March 31–April 3, 2010: Taiwan Spring School, Tainan, “Potential Discoveries at the LHC” (four lectures)
- [918] March 30, 2010: Physics Department Colloquium, National Taiwan University, Taipei, “The Coming Revolutions in Particle Physics”
- [917] March 29, 2010: Physics Department Colloquium, National Central University, Jhongli City, Taiwan, “The Coming Revolutions in Particle Physics”
- [916] March 5, 2010: Rencontres de Physique de la Vallée d’Aoste, La Thuile, “Learning to See at the LHC”
- [915] March 3, 2010: Rencontres de Physique de la Vallée d’Aoste, La Thuile, Roundtable: “The Role of the Tevatron in the LHC Era”
- [914] February 26, 2010: Physics & Astronomy Department Colloquium, Tufts University, “The Coming Revolutions in Particle Physics”
- [913] February 13, 2010: Annual Meeting of the American Physical Society, Washington, “LHC Physics Potential *vs.* Energy”
- [912] February 3, 2010: Physics Department Colloquium, University of Michigan, “The Coming Revolutions in Particle Physics”
- [911] January 21, 2010: Inaugural Symposium, DISCOVERY Center, Copenhagen, “A New World of Particle Physics”

- [910] November 9–13, 2009: Autumn Course, Laboratoire de l’Accélérateur Linéaire, Orsay, “Potential discoveries at the LHC” (four lectures)
- [906] November 5, 2009: Seminar Elementarteilchenphysik, Universität Würzburg, “*Gedanken* Worlds without Higgs Fields”
- [905] October 26, 2009: Physikalisches Kolloquium, Albert-Ludwigs Universität Freiburg, “The Coming Revolutions in Particle Physics”
- [904] October 23, 2009: Theoretical High Energy Physics Seminar, Technical University Munich, “LHC Physics Potential *vs.* Energy”
- [903] October 21, 2009: Arnold Sommerfeld Theory Colloquium, Ludwig-Maximilians-Universität, Munich, “*Gedanken* Worlds without Higgs Fields”
- [902] October 20, 2009: Public Lecture, Bayerische Akademie der Wissenschaften (Munich), sponsored by the Excellence Cluster Universe, “The Coming Revolutions in Particle Physics”
- [901] October 16, 2009: Séminaire des interactions fondamentales, Centre de Physique Théorique, Marseille, “LHC Physics Potential *vs.* Energy” plus “*Gedanken* Worlds without Higgs Fields”
- [900] September 25, 2009: High-Energy Physics and Astrophysics Seminar, Wayne State University, “*Gedanken* Worlds without Higgs”
- [899] September 24, 2009: Physics & Astronomy Department Colloquium, Wayne State University, “The Coming Revolutions in Particle Physics”
- [898] September 22, 2009: Physics Department Colloquium, Boston University, “The Coming Revolutions in Particle Physics”
- [897] September 10, 2009: *Great Minds Lecture*, Illinois Mathematics and Science Academy, “The Coming Revolutions in Particle Physics”
- [896] September 1, 2009: Opening Lecture, Second Workshop on the Large Hadron Electron Collider, Divonne, “Particle Physics and the LHeC”
- [895] August 31, 2009: Informal Seminar, CMS Collaboration, CERN, “LHC Physics Potential *vs.* Energy”
- [894] August 28, 2009: Joint Experimental-Theoretical Seminar, Fermilab, “*Gedanken* Worlds without Higgs”
- [893] May 9, 2009: Plenary Lecture, Joint Meeting of the New England Sections of the American Association of Physics Teachers and the American Physical Society, Northeastern University (Boston), “The Coming Revolutions in Particle Physics”
- [892] April 20, 2009: Münchner Physik Kolloquium, “Mass”
- [891] April 17, 2009: Theoretical High Energy Physics Seminar, Technical University Munich, “*Gedanken* Worlds without Higgs”
- [890] April 8, 2009: Physics Seminar, DESY-Zeuthen, “*Gedanken* Worlds without Higgs”
- [889] March 13, 2009: Roundtable on Plans for the Future, XIII International Workshop on Neutrino Telescopes, Venice, “Perspectives on Neutrino Telescopes”
- [888] February 6, 2009: Séminaire de Physique Experimentale, Laboratoire d’Annecy-le-Vieux de Physique des Particules, “*Gedanken* Worlds without Higgs”



- [887] February 5, 2009: CMS Physics Days, CERN, “*Gedanken* Worlds without Higgs”
- [886] December 19, 2008: Concluding Lecture, *PASC Winter School in Particle, Astrophysics and Cosmology*, Sesimbra, Portugal, “Particle Physics, Astroparticles, and Cosmology in the LHC Era”
- [885] December 16, 2008: Centro de Física Teórica de Partículas Seminar, Instituto Superior Técnico, Universidade Técnica de Lisboa, “*Gedanken* Worlds without Higgs”
- [884] November 26, 2008: 2nd Annual Workshop of the Helmholtz Alliance *Physics at the Terascale*, RWTH Aachen, “The Coming Revolutions in Particle Physics”
- [883] November 21, 2008: Netherlands National Theory Seminar, NIKHEF, Amsterdam, “*Gedanken* Worlds without Higgs”
- [882] November 4, 2008: Helmholtz Alliance *Physics at the Terascale* Seminar, Karlsruhe, “*Gedanken* Worlds without Higgs”
- [881] October 24, 2008: Institute Colloquium and Concluding Talk of the Symposium, *New Physics beyond the Standard Model*, Kavli Institute for Theoretical Physics China, Beijing, “The Coming Revolutions in Particle Physics”
- [880] October 23, 2008: Public Lecture, Tsinghua University, Beijing, “The Large Hadron Collider: a New Era in Particle Physics”
- [879] October 16, 2008: University of Karlsruhe *Graduiertenkolleg*-Workshop, Burg Liebenzell, “Evolving the Standard Model”
- [878] September 21–26, 2008: School on Quantum Physics, Bad Honnef, Germany, “Mass, Electroweak Symmetry Breaking, and Physics at the Fermi Scale” (two lectures)
- [876] July 23–30, 2008: Summer School on Theoretical High-Energy Physics and Cosmology, Paphos, Cyprus, “Introduction to the Standard Model of Particle Physics” (five lectures)
- [871] July 5, 2008: *NuFact 2008*, 10th International Workshop on Neutrino Factories, Super Beams, and Beta Beams, Valencia, “NuFact08: Perspectives”
- [870] June 27, 2008: Physikalisches Kolloquium, Universität Karlsruhe, “Mass”
- [869] June 13, 2008: *Perspectives in Particle Physics*, Stony Brook University, “The Night Before the Revolution”
- [868] May 30, 2008: Kolloquium über Teilchenphysik, Universität Karlsruhe, “The Coming Revolutions in Particle Physics”
- [867] April 17, 2008: Neutrino Journal Club, Fermilab, “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [866] April 15, 2008: Israel Joint High-Energy Seminar, Neve Shalom, “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [865] April 13, 2008: Yossef Dothan Memorial Lecture (*Emilio Segrè Distinguished Lectures in Physics of the Raymond & Beverly Sackler Foundation*), Tel Aviv University, “Mass”
- [864] March 15, 2008: XLIII Rencontres de Moriond: *QCD* and Hadronic Interactions (La Thuile, Italy), “Theoretical Summary”
- [863] January 18, 2008: Fermilab Auditorium Lecture Series, “The Coming Revolutions in Particle Physics”

- [862] December 5, 2007: Colloquium, Fermilab, “Mass”
- [861] November 16, 2007: Physics Department Colloquium, Simon Fraser University, “The Coming Revolutions in Particle Physics”
- [860] November 15, 2007: Physics Department Colloquium, University of British Columbia, “The Coming Revolutions in Particle Physics”
- [859] November 14, 2007: Special Seminar, TRIUMF (Vancouver), “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [858] October 4, 2007: Physics Department Colloquium, Purdue University, “The Coming Revolutions in Particle Physics”
- [857] October 3, 2007: Special Seminar, Purdue University, “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [856] September 15–22, 2007: International Summer School and Conference on High Energy Physics: *The Standard Model and Beyond*, Akyaka - Muğla, Turkey, “The Electroweak Theory and Higgs Physics” (four lectures)
- [852] September 6, 2007: Physics Department Colloquium, Illinois Institute of Technology, “The Coming Revolutions in Particle Physics”
- [851] August 31, 2007: TeV Particle Astrophysics 2007, Venice, “Figments, Fictions, Fantasies: Conference Summary”
- [850] August 29, 2007: TeV Particle Astrophysics 2007, Venice, “The LHC and the Future of Particle Physics”
- [849] August 9, 2007: SLAC Summer Institute, Stanford Linear Accelerator Center, “Cosmic Neutrinos”
- [848] July 25, 2007: Keynote Lecture, *Toward the ILC* (School), Fermilab, “Physics Imperatives for the ILC”
- [847] July 20, 2007: Physics Colloquium, Ruprecht-Karls Universität, Heidelberg, “The Coming Revolutions in Particle Physics”
- [846] July 2 – 5, 2007: Fermilab–KEK Neutrino Summer School “Neutrinos in the Electroweak Theory” (three lectures)
- [843] May 12, 2007: Invited Lecture, Wu-Ki Tung Symposium, Michigan State University, “Mass”
- [842] May 4, 2007: Invited Lecture, Fortieth Anniversary of the Yang Institute for Theoretical Physics, Stony Brook University, “Mass”
- [841] March 7, 2007: Fermilab Community Symposium on the International Linear Collider, “The Physics Landscape”
- [840] March 1, 2007: Citizens’ ILC Task Force, Fermilab, “The Coming Revolutions in Particle Physics”
- [839] February 12, 2007: Low Emittance Muon Collider Workshop, Fermilab, “Giant Steps”
- [838] January 8, 2007: Invited Lecture, Winter Meeting of the American Association of Physics Teachers, Seattle, “The Double Simplex: Envisioning Particles and Interactions”

- [837] January 8, 2007: Plenary Lecture, Winter Meeting of the American Association of Physics Teachers, Seattle, “The Coming Revolutions in Particle Physics”
- [836] November 28, 2006: Ken Stanfield Symposium, Fermilab, “40<sup>+</sup> Years of Particle Physics”
- [835] November 21, 2006: Experimental Seminar, Stanford Linear Accelerator Center, “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [834] November 20, 2006: Experimental Seminar, Stanford Linear Accelerator Center, “Evolving the Standard Model”
- [833] November 13, 2006: Special Seminar, Institute for High Energy Physics, Beijing, “The Coming Revolutions in Particle Physics”
- [832] November 10, 2006: Closing Lecture, China Center for Advanced Science & Technology *Workshop on TeV Physics and the Large Hadron Collider*, Beijing, “Perspectives on High Energy Physics”
- [831] November 9, 2006: Physics Department Colloquium, Tsinghua University, Beijing, “The Coming Revolutions in Particle Physics”
- [830] November 8, 2006: Physics Department Colloquium, Peking University, Beijing, “The Coming Revolutions in Particle Physics”
- [829] November 8–10, 2006: China Center for Advanced Science & Technology *Workshop on TeV Physics and the Large Hadron Collider*, Beijing, “Electroweak Theory, the Higgs Sector, and Beyond” (four lectures)
- [825] October 19, 2006: Physics Department Colloquium, Pennsylvania State University, “The Coming Revolutions in Particle Physics”
- [824] October 19, 2006: Particle Physics Seminar, Pennsylvania State University, “Extremely High-Energy Cosmic Neutrinos and Relic Neutrinos”
- [823] September 27, 2006: Physics Department Colloquium, Washington University, St. Louis, “The Coming Revolutions in Particle Physics”
- [822] September 23, 2006: Fiftieth Anniversary of the Particle Data Group, Berkeley, “Evolving the Standard Model”
- [821] September 11–12, 2006: Institute for Theoretical Physics, University of Karlsruhe, Germany, “The Electroweak Theory: Issues for the LHC Era” (four lectures)
- [817] September 5–9, 2006: Autumn School for High-Energy Physics, Maria-Laach, Germany, “The Standard Model” (four lectures)
- [813] August 17, 2006: Frontiers in Theoretical Physics, Niels Bohr Institute, Copenhagen, “The Coming Revolutions in Particle Physics”
- [812] August 4, 2006: CERN Summer Student Lectures, “Visualizing particles and their interactions”
- [811] June 22, 2006: Second World Summit: Physics Beyond the Standard Model, Galápagos Islands (Ecuador), “A Journey in Distant Countries: to the Electroweak Scale and Beyond”
- [810] June 15, 2006: Wellesley College Alumnae Visit to Fermilab, “A Little Tour in Particle Physics”
- [809] May 23, 2006: Astro/Theory Joint Pizza Seminar, Fermilab, “Gravitational Lensing of Supernova Neutrinos”

- [808] May 22, 2006: Fermilab Symposium on the Nature of Science, “The Nature of Science”
- [807] May 15–19, 2006: LNF Spring School, Physics in the LHC Era, Frascati, “Electroweak Symmetry Breaking and the Higgs Sector” (two lectures)
- [805] March 27, 2006: LISHEP 2006 – International School on High Energy Physics, Rio de Janeiro, Brazil, “Fermilab Present and Future”
- [804] March 26–31, 2006: LISHEP 2006 – International School on High Energy Physics, Rio de Janeiro, Brazil, “Electroweak Symmetry Breaking and the Higgs Sector” (three lectures)
- [801] March 9, 2006: Particle Theory and Astrophysics Seminar, University of Delaware, “Undulant Cosmologies”
- [800] March 2, 2006: Physics Research Colloquium, Caltech, “Novel Hadrons”
- [799] March 1, 2006: Particle Physics Seminar, University of California, Irvine, “Two Short Subjects: New States Associated with Charmonium; Cosmic Neutrinos & Relics”
- [798] February 28, 2006: Physics Department Colloquium, University of California, Santa Barbara, “The Coming Revolutions in Particle Physics”
- [797] February 27, 2006: Informal High Energy Physics Seminar, Caltech, “The Double Simplex: Envisioning Particles and Interactions”
- [796] February 10, 2006: Neutrino Oscillations in Venice – 2006, “Extremely High Energy Cosmic Neutrinos and Relic Neutrinos”
- [795] February 1, 2006: Sommerfeld Theory Colloquium, Ludwig-Maximilians-Universität, Munich, “The Coming Revolutions in Particle Physics”
- [794] January 11, 2006: J-Term Lecture, LHC Physics Center, Fermilab, “Large Hadron Collider Physics: Your Next Scientific Adventure”
- [793] November 11, 2005: National Science Teachers Association Midwestern Area Convention, Chicago, “The Coming Revolutions in Particle Physics”
- [792] November 1 – 17, 2005: Fermilab Academic Lectures, “The Electroweak Theory and Higgs Physics,” six lectures
- [786] October 29, 2005: Symposium to Celebrate the Fiftieth Anniversary of the Discovery of the Antiproton, Lawrence Berkeley National Laboratory, “New Worlds”
- [785] October 25, 2005: Comunicare Fisica, Laboratori Nazionali di Frascati (Italy), “Comunicare Fisica alla’americana”
- [784] October 24, 2005: Seminario di Fisica dei Campi e Particelle, Università di Roma–1 (Italy), “The Double Simplex: Envisioning Particles and Interactions”
- [783] October 8, 2005: World Year of Physics Symposium, Fermilab, “The Coming Revolutions in Particle Physics”
- [782] September 23, 2005: Bill Bardeen Symposium, Fermilab, “Beneath the Electroweak Veil”
- [781] September 9, 2005: Physics Department Colloquium, Kenyon College, “Envisioning Particles and Interactions: The Double Simplex”
- [780] September 8, 2005: Donald Hamister Distinguished Lecture, Kenyon College, “The Coming Revolutions in Particle Physics”

- [779] September 1, 2005: Physics & Astronomy Department Colloquium, University of Nebraska, “The Coming Revolutions in Particle Physics”
- [778] July 25, 2005: Plenary Lecture, 2005 Europhysics Conference on High-Energy Physics, Lisbon, “Hadronic Physics and Exotics”
- [777] July 20, 2005: GustavoFest, Symposium in Honor of Gustavo Branco, Instituto Superior Técnico, Universidade Técnica de Lisboa, “The Double Simplex: Envisioning Particles and Interactions”
- [776] June 29, 2005: QuarkNet Teachers Summer Workshop, Fermilab, “The Double Simplex: Envisioning Particles and Interactions”
- [775] June 13–17, 2005: ICTP Summer School, Trieste, “The Standard Model (Electroweak Theory) and Higgs Physics,” 5 lectures
- [770] April 25, 2005: Physics Department Colloquium, University of California, Berkeley, “The Double Simplex: Envisioning Particles and Interactions”
- [769] April 22, 2005: F. O. Birmingham Memorial Lecture, Wylie High School, Southern Methodist University, “The State of Physics . . . 40+ Years after the Feynman Lectures”
- [768] April 22, 2005: Physics Department Seminar, Southern Methodist University, “The Coming Revolutions in Particle Physics”
- [767] April 19, 2005: Plenary Lecture, Spring Meeting of the American Physical Society, Tampa, “The Double Simplex: Envisioning Particles and Interactions”
- [766] April 4, 2005: Particle Physics Seminar, University College, London, “The Double Simplex: Envisioning Particles and Interactions”
- [765] March 28, 2005: HETEP Seminar, University of Illinois—Urbana—Champaign, “The Lost Tribes of Charmonium”
- [764] March 6–11, 2005: XXXIII International Meeting on Fundamental Physics, Benasque (High Pyrenees), Aragon, Spain, “Three Lectures on Collider Physics”
- [761] March 4, 2005: Public Lecture, Museo de las Ciencias, Valencia. “The Coming Revolutions in Particle Physics”
- [760] March 3, 2005: Universidad Autónoma de Madrid, “The Double Simplex: Envisioning Particles and Interactions”
- [759] February 15, 2005: CERN Particle Physics Seminar, “The Double Simplex: Envisioning Particles and Interactions”
- [758] February 1, 2005: *Musique et Physique*, Lectures to Celebrate the Fiftieth Anniversary of CERN, the Hundredth Anniversary of Einstein’s Annus Mirabilis, and the World Year of Physics, Physics Department, University of Geneva, “Et rien ne fut plus comme avant . . . ”
- [757] January 8, 2005: Eightieth Birthday Celebration for J. D. Jackson, Lawrence Berkeley National Laboratory, “Looking Ahead to Dave Jackson’s 90th Birthday Gala”
- [756] December 2, 2004: Physics Department Colloquium, Johns Hopkins University, “The Double Simplex: Envisioning Particles and Interactions”
- [755] December 1, 2004: High-Energy Physics Seminar, Johns Hopkins University, “Cosmic-Neutrino Absorption Spectroscopy and the Evolution of the Universe”

- [754] November 30, 2004: Elementary Particle Physics 2010 Panel, Washington, “The Coming Revolutions in Particle Physics”
- [753] November 9, 2004: New Horizons in Science Briefing (Council for the Advancement of Science Writing), University of Arkansas, “The Coming Revolutions in Particle Physics”
- [752] October 24, 2004: First Meeting of the American Physical Society Topical Group on Hadronic Physics, Fermilab, “Meson Spectroscopy: a Theoretical Overview”
- [751] October 21, 2004: Physics & Astronomy Colloquium, University of Oklahoma, “The Double Simplex: Envisioning Particles and Interactions”
- [750] October 21, 2004: High-Energy Physics Seminar, University of Oklahoma, “The Lost Tribes of Charmonium (and Other Stories)”
- [749] October 14, 2004: Physics Department Colloquium, Massachusetts Institute of Technology, “The Double Simplex: Envisioning Particles and Interactions”
- [748] September 29, 2004: DuPage Division, Illinois Association of School Boards Fall Dinner Meeting, Fermilab, “Remarks on Teaching Science and the Nature of Science”
- [747] September 28, 2004: Physics Department Colloquium, Kansas State University, “Nature’s Greatest Puzzles”
- [746] September 27, 2004: Physics Department Colloquium, University of Kansas, “The Double Simplex: Envisioning Particles and Interactions”
- [745] September 13, 2004: Physics Department Colloquium, Iowa State University, “The Coming Revolutions in Particle Physics”
- [744] September 8, 2004: Physics Department Colloquium, Indiana University, “The Coming Revolutions in Particle Physics”
- [743] August 3, 2004: Science Undergraduate Laboratory Internships Lecture, Stanford Linear Accelerator Center, “Envisioning Particles and Interactions”
- [742] August 2, 2004: Opening Talk, SLAC Summer Institute, Stanford Linear Accelerator Center, “Nature’s Greatest Puzzles”
- [741] July 17, 2004: Physics at LHC 2004, Vienna, Concluding Talk
- [740] July 12, 2004: DESY Colloquium, Hamburg, “Envisioning Particles and Interactions”
- [739] June 29, 2004: Sixth International Conference on Hyperons, Charm, and Beauty Hadrons, Illinois Institute of Technology, “Quarkonium: New Developments”
- [738] June 5, 2004: Heavy Quarks and Leptons 2004, University of Puerto Rico, Mayagüez, Conference Summary
- [737] April 28, 2004: Colloquium, Fermilab, “The Coming Revolutions in Particle Physics”
- [736] April 21, 2004: High-Energy / RIKEN Theory Seminar, Brookhaven National Laboratory, “Charmonium: the Next Wave”
- [735] April 20, 2004: Physics Department Colloquium, Brookhaven National Laboratory, “The Double Simplex: Envisioning Particles and Interactions”
- [734] March 23, 2004: Séminaire Général du Service de Physique Théorique, Saclay, “Le double simplexe : une conception des particules élémentaires et des interactions fondamentales”

- [733] March 11, 2004: Tevatron University, Fermilab, “The Double Simplex: Envisioning Particles and Interactions”
- [732] March 5, 2004: XVIIIth Rencontres de la Vallée d’Aoste, Evening Lecture, “The Double Simplex: Envisioning Particles and Interactions”
- [731] March 3, 2004: XVIIIth Rencontres de la Vallée d’Aoste, Invited Talk, “Quarkonium: New Developments”
- [730] February 26, 2004: Thursday Theory Seminar, CERN, “Charmonium: the Next Wave”
- [729] February 24, 2004: Institute for Particle Physics Colloquium, University of Valencia, “Envisioning Particles and Interactions”
- [728] February 23, 2004: Theoretical Physics Seminar, University of Valencia, “Charmonium: the Next Wave”
- [727] February 6, 2004: Physics Division Colloquium, Argonne National Laboratory, “The Coming Revolutions in Particle Physics”
- [726] February 2, 2004: High-Energy Physics Seminar, University of Chicago, “Charmonium: the Next Wave”
- [725] November 10, 2003: Physics Department Colloquium, Harvard University, “The Double Simplex: Envisioning Particles and Interactions”
- [724] November 10, 2003: HEPL Seminar, Harvard University, “Charmonium: the Next Wave”
- [723] October 7, 2003: Colloquium, Stanford Linear Accelerator Center, “Envisioning Particles and Interactions”
- [722] October 7, 2003: Experimental Physics Seminar, Stanford Linear Accelerator Center, “Charmonium: the Next Wave”
- [721] September 12, 2003: Physics Department Colloquium, University of Virginia, “Envisioning Particles and Interactions”
- [720] September 5, 2003: Joint Experimental Theoretical Seminar, Fermilab, “The Double Simplex: Envisioning Particles and Interactions”
- [719] August 15, 2003: QuarkNet Teachers Conference, Fermilab, “Envisioning Particles and Interactions”
- [718] June 1–14, 2003: CERN-CLAF School, Mexico, “The Standard Model and Beyond” (four lectures)
- [714] April 22, 2003: Physics for Everyone Lecture, Fermilab, “Physics without Borders”
- [713] April 5, 2003: Invited Talk, April Meeting of the American Physical Society / DPF2003, “A TeV Linear Collider: Why? Why Now?”
- [712] April 5, 2003: April Meeting of the American Physical Society / DPF2003, “Characterizing Neutrino Properties and Cosmic Sources with Neutrino Observatories”
- [711] January 30, 2003: *Neutrinos: Data, Cosmos, and Planck Scale* Program Seminar, Kavli Institute for Theoretical Physics, Santa Barbara, “Neutrino Observatory Characterization of Cosmic Sources and Neutrino Properties”

- [710] January 9, 2003: Physics Department Colloquium, University of Chicago, “The Futures of Particle Physics”
- [709] November 15, 2002: Physics Department Colloquium, University of Arizona, “The Futures of Particle Physics”
- [708] October 30, 2002: Physics Department Colloquium, University of Pennsylvania, “The Coming Revolutions in Particle Physics”
- [707] October 29, 2002: Physics Department Colloquium, Bucknell University, “The Higgs Boson and the Origins of Mass”
- [706] October 28, 2002: Public Lecture, Bucknell University, “The Coming Revolutions in Particle Physics”
- [705] October 18, 2002: Moti Lal Rustgi Memorial Lecture, University of Buffalo, “The Coming Revolutions in Particle Physics”
- [704] October 11, 2002: Journal Club, Fermilab, “*B*-Meson Gateways to Missing Charmonium Levels”
- [703] August 25-30, 2002: European School of Physics, Pylos, Greece, “The Standard Model (Electroweak Theory)” (six lectures)
- [697] July 25, 2002: Neutrinos for Fun and Profit Seminar, Fermilab, “Interactions of Extraterrestrial Neutrinos”
- [696] April 21, 2002: Invited Talk, April Meeting of the American Physical Society, Albuquerque, “The Art of the Public Lecture”
- [695] February 13, 2002: Physics Department Colloquium, Universitat Autònoma de Barcelona, “Future Directions for Particle Physics”
- [694] February 12, 2002: Museu de la Ciència de la Fundació “La Caixa,” Barcelona, “The Coming Revolutions in Particle Physics”
- [693] January 14, 2002: Twenty-First Century Science Lecture, Graham School of General Studies, University of Chicago, “The Coming Revolutions in Particle Physics”
- [692] January 5, 2002: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [691] December 3, 2001: The Once and Future Web, a Symposium at the Stanford Linear Accelerator Center, “How the Web Has Changed How High-Energy Physics Is Done”
- [690] November 27, 2001: Physics Department Colloquium, Boston University, “The Futures of Particle Physics”
- [689] November 2, 2001: The Future of Creativity Symposium at the School of the Art Institute of Chicago, “Fermilab as a Creative Community”
- [688] October 27, 2001: Closing Lecture of the Third International Symposium on Large Hadron Collider Physics and Detectors, Chia, Sardinia, Italy, “Visions: the Coming Revolutions in Particle Physics”
- [687] July 20, 2001: Snowmass 2001: A Summer Study on the Future of Particle Physics, closing talk, “Next Steps”
- [686] July 1, 2001: Snowmass 2001: A Summer Study on the Future of Particle Physics, opening talk, “Why We Are Here”



- [685] June 22, 2001: Particle Accelerator Conference, Chicago, keynote address, “Particle Physics—Future Directions”
- [684] June 1, 2001: Les Houches Workshop on Collider Physics, “Summary and Outlook”
- [683] April 30, 2001: Annual Meeting of the American Physical Society, Washington, “Snowmass 2001 and the Future of Particle Physics”
- [682] March 30, 2001: Forum 21: World Cultural Forum, Deauville, France, “New Worlds of Particle Physics”
- [681] March 4-5, 2001: Frontiers of Contemporary Physics, Vanderbilt University, “The Futures of Particle Physics,” two lectures
- [679] February 16, 2001: Annual Meeting of the American Association for the Advancement of Science, San Francisco, symposium on *The Coming Revolutions in Particle Physics*, “A Decade of Discovery”
- [678] February 7, 2001: Physics Students Prize Lecture, Ohio Wesleyan University, “Coming Attractions in Particle Physics”
- [677] February 7, 2001: Physics Lecture, Ohio Wesleyan University, “Particle Physics: the Science of Matter, Space, and Time”
- [676] February 1, 2001: Tevatron University, Fermilab, “The Futures of Particle Physics”
- [675] January 17, 2001: Quark Matter 2001, State University of New York, Stony Brook, “Physics at the Millennium”
- [674] January 9, 2001: Aspen Winter Physics Conference, “The Futures of Particle Physics”
- [673] January 6, 2001: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [672] December 11, 2000: High-Energy Physics Lunch Seminar, University of Chicago, “The Road to Snowmass”
- [671] November 14, 2000: Food for Thought Seminar, Fermilab, “The Road to Snowmass”
- [670] November 14, 2000: Science for Everyone Lecture, Fermilab, “Particle Physics: The World of Matter, Space, and Time”
- [669] November 11, 2000: Quarknet Weekend @ Fermilab, “The Secret Life of Higgs Bosons”
- [668] November 1, 2000: Research Progress Meeting, Lawrence Berkeley National Laboratory, “Preparations for Snowmass 2001”
- [667] September 27, 2000: DESY Theory Workshop: CP Violation and Rare Processes: Standard Model and Beyond, “Discrete Symmetries: the Standard Model and Beyond”
- [666] September 22, 2000: ECFA/DESY Linear Collider Workshop, Hamburg, “Preview of Snowmass 2001”
- [665] August 9, 2000: DPF2000, Ohio State University, “Preview of Snowmass 2001”
- [664] July 17-25, 2000: CERN Lectures for Summer Students, “The Standard Model of Particle Physics,” eight lectures
- [656] June 27, 2000: Fermilab Users Meeting, “Preview of Snowmass 2001”

- [655] June 18, 2000: State University of New York, Stony Brook, Symposium on Physics and Astronomy at the Millennium, “Frontiers of Physics & Astronomy for the New Millennium” (closing lecture)
- [654] June 5–8, 2000: Theoretical Advanced Studies Institute, Boulder, “The Electroweak Theory,” four lectures
- [650] April 27, 2000: Physics Department Colloquium, University of California, Los Angeles, “Coming Attractions in Particle Physics”
- [649] April 3, 2000: Colloquium, Stanford Linear Accelerator Center, “Physics Opportunities in Fermilab’s Futures”
- [648] April 15, 2000: Society of Physics Students Regional Meeting, University of Missouri–Kansas City, “Nothing Is Too Wonderful to Be True”
- [647] March 18, 2000: Fermilab Symposium on the Nature of Science, “The Nature of Science”
- [646] February 25, 2000: Physics Department Colloquium, University of North Carolina, Chapel Hill, “Coming Attractions in Particle Physics”
- [645] February 25, 2000: Astrophysics Journal Club, University of North Carolina, Chapel Hill, “Neutrino Physics with a Millimole of Muons”
- [644] February 14–19, 2000: Asian Winter School in Particle Physics, Korea Institute for Advanced Study, Seoul, “Physics of the Higgs Sector,” five lectures
- [639] January 8, 2000: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [638] December 15, 1999:  $\mu\mu$ ’99, 4th International Conference on the Physics Potential and Development of  $\mu\mu$  Colliders, San Francisco, “The State of the Standard Model”
- [637] November 26, 1999: Séminaire Commun (Collège de France–École Normale Supérieure–Paris VI–Paris VII), “Les Avenirs en Physique des Particules Vus de Fermilab”
- [636] November 24, 1999: Séminaire Exceptionnel, École Polytechnique, Palaiseau, “Les Avenirs en Physique des Particules Vus de Fermilab”
- [635] November 19, 1999: DAFNE ’99, Laboratori Nazionali di Frascati, “Conference Summary: CP Violation and Rare Decays”
- [634] November 15, 1999: Special Seminar, Laboratori Nazionali di Frascati, “Neutrino Physics with a Millimole of Muons”
- [633] November 9, 1999: Physics Department Colloquium, Ohio State University, “Coming Attractions in Particle Physics”
- [632] November 9, 1999: Special High-Energy Physics Seminar, Ohio State University, “Neutrino Physics with a Millimole of Muons”
- [631] October 15, 1999: Laboratory for Nuclear Studies Journal Club, Cornell University, “Neutrino Physics with a Millimole of Muons”
- [630] October 13, 1999: Physics Department Colloquium, Duke University, “Coming Attractions in Particle Physics”
- [629] October 13, 1999: High-Energy Physics Seminar, Duke University, “Physics Opportunities in Fermilab’s Futures”

- [628] October 9, 1999: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [627] September 25, 1999: *B* Physics at the Tevatron Workshop, Fermilab, “Doubly Heavy Baryons”
- [626] September 22, 1999: Physics Department Colloquium, University of Illinois–Chicago, “Coming Attractions in Particle Physics”
- [625] July 16–24, 1999: CERN Lectures for Summer Students, “The Standard Model of Particle Physics,” eight lectures
- [617] July 8, 1999: New Perspectives 99, Fermilab, “Making Waves”
- [616] July 7, 1999: Annual Users Meeting, Fermilab, “Memos for the Next Millennium”
- [615] July 5, 1999: ECFA/ICFA Workshop on a Neutrino Factory, Lyon, “Problems of Identity”
- [614] June 30, 1999: ICFA Instrumentation School, Istanbul, Turkey, “Perspectives in High-Energy Physics”
- [613] June 16, 1999: Enrichment Lecture for Advanced Placement Readers, University of Nebraska, Lincoln, “Nothing Is Too Wonderful to Be True”
- [612] June 9, 1999: Summer Student Lecture, Fermilab, “Coming Attractions in Particle Physics”
- [611] June 3, 1999: Physics Enrichment Camp, National University of Singapore, “Questions of Scale”
- [610] June 2, 1999: Physics Enrichment Camp, National University of Singapore, “Neutrino Wonders”
- [609] June 1, 1999: Physics Enrichment Camp, National University of Singapore, “Questions of Scale”
- [608] May 31, 1999: Public Lecture, National University of Singapore, “Nothing Is Too Wonderful to Be True”
- [607] May 31, 1999: Physics Enrichment Camp, National University of Singapore, “Neutrino Wonders”
- [606] April 14, 1999: Pheno '99: *Phenomenology for the Third Millennium*, University of Wisconsin, Madison, “Hadron Colliders: Present and Future”
- [605] April 12, 1999: Physics Department Colloquium, University of Kansas, “Top Matters”
- [604] March 20, 1999: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [603] February 8, 1999: Special Seminar, Universidad Autónoma de Madrid, “Physics Opportunities in Fermilab’s Futures”
- [602] February 1–5, 1999: Winter Meeting on Particle Physics, Sierra Nevada, Spain, “Electroweak Symmetry Breaking and the Higgs Sector,” three lectures
- [599] January 16, 1999: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [598] January 15, 1999: Joint Experimental Theoretical Seminar, Fermilab, “Physics Opportunities in Fermilab’s Futures”
- [597] January 11, 1999: Illinois Mathematics and Science Academy Great Minds Seminar, “What Is Theoretical Physics?”
- [596] November 4, 1998: Physics Department Colloquium, University of Alabama, “Top Matters”
- [595] October 27, 1998: APS Centennial Colloquium, Illinois State University, “Nothing Is Too Wonderful to Be True”

- [594] October 11, 1998: Heavy Quark 98, Fermilab, “Perspectives on HQ98”
- [593] September 28, 1998: APS Centennial Colloquium, Western Michigan University, “Top Matters”
- [592] July 16–24, 1998: CERN Lectures for Summer Students, “The Standard Model of Particle Physics,” seven lectures
- [585] June 10, 1998: Summer Students Lecture Series, Fermilab, “Coming Attractions in Particle Physics: what (we know) we don’t know”
- [584] June 6, 1998: Investment Analysts Society of Chicago Meeting, Fermilab, “Nothing Is Too Wonderful to Be True”
- [583] May 21, 1998: Physics Department Colloquium, University of California, Santa Cruz, “Top Matters”
- [582] May 21, 1998: Santa Cruz Institute of Particle Physics Seminar, University of California, Santa Cruz, “Physics with a Millimole of Muons”
- [581] April 27, 1998: Physics Department Colloquium, University of California, Berkeley, “Top Matters”
- [580] April 15, 1998: United Kingdom Institute of Physics Annual Meeting on Particle Physics, Manchester, “Views from the Top”
- [579] April 1, 1998: Department of Energy Program Review, Fermilab, “Physics Opportunities in Fermilab’s Futures”
- [578] March 21, 1998: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [577] March 7, 1998: URA Visiting Committee, Fermilab, “Physics Opportunities in Fermilab’s Futures”
- [576] February 26, 1998: Public Lecture, Texas Tech University, “Nothing Is Too Wonderful to Be True”
- [575] February 26, 1998: Physics Department Colloquium, Texas Tech University, “Top Matters”
- [574] February 26, 1998: Modern Physics Lecture, Texas Tech University, “How to Cheat at Quantum Mechanics”
- [573] February 20, 1998: ITP Colloquium, Institute for Theoretical Physics, Santa Barbara, “Physics with a Millimole of Muons”
- [572] February 19, 1998: Research Progress Meeting, Lawrence Berkeley National Laboratory, “Physics with a Millimole of Muons”
- [571] February 12, 1998: University of DØ & CDF, Fermilab, “Mesons with Beauty and Charm”
- [570] January 28, 1998: Public Lecture sponsored by the Aspen Center for Physics, “Nothing Is Too Wonderful to Be True”
- [569] January 27, 1998: Aspen Winter Physics Conference, “Hadron Colliders: The Top Quark & Higgs Boson”
- [568] January 22, 1998: Physics Department Colloquium, University of Illinois, “Top Matters”
- [567] January 17, 1998: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [566] January 8, 1998: High-Energy Physics Seminar, University of Bergen, Norway, “*Top*-ology”

- [565] January 4, 1998: Nordic High-Energy Symposium, Spåtind, Norway, “Top and Higgs at the Tevatron”
- [564] December 10, 1997:  $\mu\mu$ 97, 4th International Conference on the Physics Potential and Development of  $\mu\mu$  Colliders, San Francisco, “The Top Quark and Higgs Boson at Hadron Colliders”
- [563] November 10, 1997: Physics Department Colloquium, Southern Methodist University, “Top Matters”
- [562] November 9, 1997: Workshop on Physics at the First Muon Collider and at the Front End of a Muon Collider, Fermilab, “Conference Summary”
- [561] November 4, 1997: Public Lecture, SciFig97, International Conference on Scintillating & Fiber Detectors, University of Notre Dame, “Nothing Is Too Wonderful to Be True”
- [560] October 22, 1997: Physics Department Colloquium, Northwestern University, “Top Matters”
- [559] October 16, 1997: High-Energy Physics Seminar, Boston University, “Interactions of Extraterrestrial Neutrinos at Ultrahigh Energies”
- [558] October 15, 1997: Harvard-MIT-BU Joint Theory Seminar, Boston University, “Mesons with Beauty and Charm”
- [557] October 14, 1997: *Cosmos Revisited: Lectures in Memory of Carl Sagan*, Smithsonian Institution, Washington, “The Particle Cosmos”
- [556] September 5, 1997: Physics Department Colloquium, University of Virginia, “Nothing Is Too Wonderful to Be True”
- [555] September 4, 1997: High-Energy Physics Seminar, University of Virginia, “Mesons with Beauty and Charm”
- [554] August 15, 1997: Aspen Center for Physics Colloquium, “Top Matters”
- [553] August 6, 1997: Workshop on New Physics at the Tevatron and LEP II, Aspen Center for Physics, “The Tevatron Physics Program: Recent Results and Future Prospects”
- [552] July 14, 1997: Fermilab Users Meeting, “Nothing Is Too Wonderful to Be True”
- [551] June 30, 1997: Symposium on Twenty Beautiful Years of the Bottom Physics, Illinois Institute of Technology, “Realizing the Potential of Quarkonium”
- [550] June 25, 1997: Fermilab Colloquium, “Top Matters”
- [549] June 3, 1997: Workshop on Cosmic Neutrinos: Origin, Production, Detection, Centre de Physique des Particules, Marseille, “Neutrino Interaction Cross Sections”
- [548] April 30, 1997: High-Energy Physics Seminar, Princeton University, “Interactions of Extraterrestrial Neutrinos at Ultrahigh Energies”
- [547] March 10, 1997: Public Lecture, Centre College, Danville, Kentucky, “The Small Things of Nature: Postcards from the Particle Frontier”
- [546] March 10, 1997: Science Colloquium, Centre College, Danville, Kentucky, “*Top*-ology”
- [545] March 10, 1997: Modern Physics Lecture, Centre College, Danville, Kentucky, “How to Cheat at Quantum Mechanics”

- [544] February 27, 1997: Physics Department Colloquium, Princeton University, “Top Matters”
- [543] January 22, 1997: High-Energy Physics Seminar, University of California, Santa Barbara, “*Top-ology*”
- [542] January 20, 1997: High-Energy Physics Seminar, Caltech, “*Top-ology*”
- [541] October 18, 1996: Physics Department Colloquium, Trinity College, Dublin, “*Top-ology*”
- [540] September 23, 1996: Physics Department Colloquium, University of Iowa, “*Top-ology*”
- [539] June 18-21, 1996: Advanced School on Electroweak Physics, Balearic Islands, Spain, “Hadron Colliders: Experimental Perspectives. Top and Higgs Physics” (four lectures)
- [535] May 10, 1996: Workshop on Physics at a High Luminosity Tevatron Collider, Fermilab, “Top Priorities”
- [534] April 30, 1996: Honors Modern Physics Course, University of Rochester (via teleconference), “How to Cheat at Quantum Mechanics”
- [533] March 30, 1996: Workshop on High Energy Physics at the LHC, Fermilab, “Workshop Summary”
- [532] February 28, 1996: Special Seminar, Wilson Laboratory, Cornell University, “Mesons with Beauty and Charm”
- [531] February 27, 1996: Undergraduate Physics Seminar, Binghamton University, “How to Cheat at Quantum Mechanics”
- [530] February 26, 1996: Public Lecture, Binghamton University, “The Small Things of Nature: Postcards from the Particle Frontier”
- [529] February 26, 1996: Physics Department Colloquium, Binghamton University, “*Top-ology*”
- [528] February 19, 1996: High-Energy Physics Seminar, University of Chicago, “Interactions of Extraterrestrial Neutrinos at Ultrahigh Energies”
- [527] February 16, 1996: Special High-Energy Physics Colloquium, University of California, San Diego, “Interactions of Extraterrestrial Neutrinos at Ultrahigh Energies”
- [526] February 15, 1996: Physics Department Colloquium, University of California, San Diego, “*Top-ology*”
- [525] February 8, 1996: New Phenomena at the Tevatron Lecture Series, Fermilab, “Production of Superpartners in Hadron-Hadron Collisions”
- [524] February 6, 1996: Theoretical Astrophysics Seminar, Fermilab, “Interactions of Extraterrestrial Neutrinos at Ultrahigh Energies”
- [523] January 24, 1996: Physics 290e Seminar, University of California, Berkeley (via teleconference), “Symmetries in Particle Physics”
- [522] January 22, 1996: Physics Department Colloquium, Iowa State University, “*Top-ology*”
- [521] January 22, 1996: Special High-Energy Physics Seminar, Iowa State University, “Ultrahigh-Energy Neutrino Interactions”
- [520] January 6, 1996: Saturday Morning Physics, Fermilab, “Particles and Forces”
- [519] December 8, 1995: Physics Department Colloquium, University of Virginia, “*Top-ology*”

- [518] November 15, 1995: High-Energy Physics Seminar, Princeton University, “Top-ology”
- [517] November 9, 1995: High-Energy Physics Seminar, University of California, Irvine, “Top-ology”
- [516] October 22, 1995: II<sup>m</sup>c Rencontres du Vietnam, Ho Chi Minh City, “Particle Physics: Themes and Challenges”
- [515] October 11, 1995: Institute for Theoretical Physics Colloquium, Santa Barbara, “Ultrahigh-Energy Neutrino Interactions”
- [514] October 9, 1995: Physics Department Colloquium, University of California, Davis, “Top-ology”
- [513] October 6, 1995: Journal Club, Institute for Nuclear and Particle Astrophysics, Lawrence Berkeley Laboratory, “Interactions of Ultrahigh-Energy Neutrinos”
- [512] September 30, 1995: Smithsonian Institution *Campus on the Mall*, Washington, “The Top Quark: Its Place in Today’s World”
- [511] September 8, 1995: Weak Interactions and Neutrinos 95, Talloires (Haute Savoie) France, “Conclusions / Perspectives”
- [510] September 7, 1995: Weak Interactions and Neutrinos 95, Talloires (Haute Savoie) France, “Ultrahigh-Energy Neutrino Interactions”
- [509] September 7, 1995: Weak Interactions and Neutrinos 95, Talloires (Haute Savoie) France, “ $B_c$ ”
- [508] August 3, 1995: Aspen Rotary Club, “The Top Quark”
- [507] August 2, 1995: Heinz R. Pagels Memorial Lecture, Aspen Center for Physics, “Top Quark Secrets: Postcards from the Particle Frontier”
- [506] June 6, 1995: Fermilab Summer Students Lecture, “The World according to Particle Physics”
- [505] May 5, 1995: Theory Seminar, Laboratory of Nuclear Studies, Cornell University, “Top-ology”
- [504] April 25, 1995: Journal Club, Laboratory of Nuclear Studies, Cornell University, “Interactions of Ultrahigh-Energy Neutrinos”
- [503] April 6, 1995: Society of Physics Students Seminar, Cornell University, “Particle Physics after the Top Quark”
- [502] March 31, 1995: Physics Seminar, Lawrence University, Appleton, Wisconsin, “Particle Physics after the Top Quark”
- [501] March 30, 1995: Science Hall Colloquium, Lawrence University, Appleton, Wisconsin, “The Small Things of Nature: Postcards from the Particle Frontier”
- [500] March 17, 20, 21, 22, 1995: Fermilab Academic Lecture Series, “Four Memos for the Next Millennium: A Brief Future of Particle Physics” (four lectures)
- [496] February 21, 1995: Workshop on Heavy Flavors *cbt*, Rio de Janeiro, “Top-ology”
- [495] February 13-16, 1995: LISHEP95, LAFEX International School of High Energy Physics, Rio de Janeiro, “Four Memos for the Next Millennium: A Brief Future of Particle Physics” (four lectures)
- [491] December 19, 1994: “Alphabet Soup” Informal Theory Seminar, Fermilab, “The Proton and the Top, and Other Stories”

- [490] November 14, 1994: High Energy Physics Seminar, Northwestern University, “Mesons with Beauty and Charm”
- [489] November 4, 1994: Fermilab Auditorium Lecture Series, “The Small Things of Nature: Postcards from the Particle Frontier”
- [488] June 25, 1994: Concluding Talk, VI<sup>me</sup> Rencontre de Blois (*Au Coeur de la Matière / To the Heart of the Matter*), Château de Blois, France, “Conclusions and Perspectives”
- [487] June 2, 1994: Summer Lecture Series for College Students, Fermilab, “Particle Physics after the Top Quark”
- [486] May 6, 1994: Weak Interactions Informal Lunch Seminar, Institute for Theoretical Physics, Santa Barbara, “Mesons with Beauty and Charm”
- [485] May 4, 1994: High Energy Physics Seminar, University of California, Santa Barbara, “Particle Physics after ‘Evidence for Top . . .’ ”
- [484] March 25, 1994: Plenary Lecture, OPAL Collaboration Meeting, CERN, “Some Current Topics in Heavy-Flavor Physics”
- [483] March 23, 1994: Séminaire Exceptionnel, Laboratoire de Physique Corpusculaire, Université de Clermont-Ferrand, “ $B^{**}$  Tag”
- [482] March 22, 1994: Heavy Flavors Working Group, L<sub>3</sub> Collaboration, CERN, “ $B_c$  and Orbitally Excited Heavy-Light Mesons”
- [481] March 21, 1994: PPE Seminar, CERN, “ $B^{**}$  Tag: Orbitally Excited Heavy-Light Mesons”
- [480] March 14, 1994: Special Phenomenological Theory Seminar, CERN, “Mesons with Beauty and Charm”
- [479] March 12, 1994: Les Rencontres de Physique de la Vallée d’Aoste, La Thuile, “Supercollider Physics”
- [478] March 4, 1994: International Symposium and Tribute in Honor of Robert R. Wilson on His 80th Birthday, Celebrating an Era of Courage and Creativity, Fermilab, “Golden Ages”
- [477] February 22, 1994: Department of Physics and Center for Nonlinear and Nonequilibrium Aeroscience Joint Colloquium, Florida A&M University, Tallahassee, “Frontiers of Particle Physics.”
- [476] February 11, 1994: Weak Interactions Informal Lunch Seminar, Institute for Theoretical Physics, Santa Barbara, “Playing  $B^{**}$  Tag”
- [475] February 8, 1994: Research Progress Meeting, Lawrence Berkeley Laboratory, “Mesons with Beauty and Charm”
- [474] February 7, 1994: Theoretical Physics Seminar, University of California, Berkeley, “ $B^{**}$  Tag: Properties of Orbitally Excited Heavy-Light Mesons”
- [473] January 13, 1994: E791 Collaboration Meeting, Fermilab, “Properties of  $p$ -wave  $D$  and  $B$  Mesons”
- [472] November 17, 1993: Theoretical Physics Seminar, Cornell University, “Properties of  $p$ -wave  $D$  and  $B$  Mesons”
- [471] October 25, 1993: High-Energy Theory-Experiment-Phenomenology Seminar, University of Illinois, Urbana-Champaign, “Mesons with Beauty and Charm”



- [470] October 6, 1993: University of California–Santa Barbara High-Energy Physics Seminar, “Playing  $B^{**}$  Tag: Orbitally Excited Heavy-Light Mesons”
- [469] September 8, 1993: Boston University–Harvard–MIT Joint Theory Seminar, Boston, “Playing  $B^{**}$  Tag: Orbitally Excited Heavy-Light Mesons”
- [468] September 7, 1993: “Alphabet Soup” Informal Theory Seminar, Fermilab, “What Is a Proton?”
- [467] August 9, 1993: Workshop on Perspectives in High Energy Strong Interaction Physics, Fermilab, “Nucleon Structure in the Chiral Quark Model.”
- [466] June 25, 1993: Workshop on  $B$  Physics at Hadron Accelerators, Snowmass, Colorado, “Properties of Excited  $B$  Mesons.”
- [465] June 24, 1993: Workshop on  $B$  Physics at Hadron Accelerators, Snowmass, Colorado, “Mesons with Beauty and Charm.”
- [464] June 15, 1993: Fermilab Summer Students Seminar, “Frontiers of Particle Physics.”
- [463] February 25, 1993: Physics Department Colloquium, Wayne State University, “Supercollider Physics.”
- [462] February 18, 1993: Physics Department Colloquium, Florida State University, “Supercollider Physics.”
- [461] February 18, 1993: High-Energy Physics Seminar, Florida State University, “Flavor Asymmetry of the Nucleon Sea.”
- [460] September 26, 1992: CDF Collaboration Meeting, Fermilab, “Exotic-Particle Searches in CDF.”
- [459] June 10, 1992: Summer Student Lecture, Fermilab, “Frontiers of Particle Physics.”
- [458] March 31, 1992: Physics Department Colloquium, Southern Methodist University, “The Gottfried Sum Rule and Quasistatic Properties of Hadrons.”
- [457] February 8, 1992: AAAS\*92, Annual Meeting of the American Association for the Advancement of Science, Chicago, “Frontiers of Particle Physics.”
- [456] December 17, 1991: Schrödinger Gastprofessur Lecture, Universität Wien, “Sum Rules and Nucleon Structure.”
- [455] December 12, 1991: Schrödinger Gastprofessur Lecture, Universität Wien, “Mesons with Beauty and Charm.”
- [454] December 10, 1991: Schrödinger Gastprofessur Lecture, Universität Wien, “Supercollider Physics.”
- [453] December 7, 1991: Invited Talk, Triangle Seminar on Particle Physics, Vienna, “Sum Rules and Nucleon Structure.”
- [452] November 20, 1991: Physics Department Colloquium, University of Arizona, “Supercollider Physics.”
- [451] November 19, 1991: High-Energy Physics Seminar, University of Arizona, “Sum Rules and Nucleon Structure.”
- [450] October 25, 1991: Joint Experimental Theoretical Seminar, Fermilab, “Sum Rules and Nucleon Structure.”

- [449] October 16, 1991: Particle Physics Seminar, Michigan State University, “Mesons with Beauty and Charm.”
- [448] June 5, 1991: Summer Lectures for College Students, Fermilab, “The Future of Particle Physics”
- [447] May 7, 1991: Physics Department Colloquium, Brookhaven National Laboratory, “Supercollider Physics”
- [446] March 29, 1991: Séminaire, DPHPE, CEN-Saclay, “Les Activités et l’Avenir de Fermilab”
- [445] March 28, 1991: Séminaire, Laboratoire de l’Accélérateur Linéaire, Orsay, “Mésons  $b\bar{c}$ ”
- [444] March 22, 1991: Summary Talk, XXVI Rencontre de Moriond, Les Arcs (Savoie) France
- [443] November 7, 1990: Physics Department Colloquium, Northwestern University, “Supercollider Physics”
- [442] November 2, 1990: Beyond the Standard Model II, University of Oklahoma, “Gauge Boson Dynamics”
- [441] November 1, 1990: Supersymposium, Centennial of the University of Oklahoma, “Supercollider!”
- [440] October 15, 1990: Theoretical Physics Seminar, Lawrence Berkeley Laboratory, “Gauge Boson Dynamics”
- [439] October 11, 1990: SSC Solenoid Detector Meeting, Fermilab, “Report on the LHC Workshop in Aachen”
- [438] May 28–31, 1990: Symposium on TeV Physics, China Center for Advanced Science and Technology, Beijing, “Supercollider Physics,” three lectures
- [435] February 7, 1990: Informal Seminar, Service de Physique Théorique, CEN-Saclay, “Supercollider Physics”
- [434] February 5–9, 1990: Cours d’hiver, Centre d’Etudes Nucléaires de Saclay, “La Physique aux supercollisionneurs hadroniques,” five lectures
- [429] January 25, 1990: Physics Department Colloquium, University of Illinois, Urbana-Champaign, “Supercollider Physics”
- [428] January 5, 1990: Symposium on the SSC and Society, Rice University, “Particle Physics: An Introduction to Recent Developments”
- [427] December 7, 1989: Physics Department Colloquium, University of Chicago, “Supercollider Physics”
- [426] November 30, 1989: 4D Seminar, Lawrence Berkeley Laboratory, “The WYSIWYG Assumption and Cosmological Redshifts”
- [425] November 27, 1989: Laboratory Seminar, Oak Ridge National Laboratory, “The Science of the Supercollider”
- [424] November 16, 1989: Theoretical Physics Seminar, University of Texas, Austin, “SSC Physics Issues”
- [423] October 1, 1989: Conference on Physics and Experiments for the Supercollider, Dallas, “Scientific Questions for the Supercollider”

- [422] July 24, 1989: Workshop on Tracking Systems for the SSC, Vancouver, “The Physics Program of the SSC”
- [421] June 21, 1989: IXth International Conference on Physics in Collision, Ma’ale Hachamisha (Jerusalem), Israel, “Conference Summary”
- [420] June 16, 1989: High-Energy Physics Seminar, Tel Aviv University, “The Superconducting Super Collider: Physics Prospects and Project Status”
- [419] June 15, 1989: Physics Department Colloquium, Weizmann Institute of Science, Rehovot, “Supercollider Physics”
- [418] June 13, 1989: Laboratoire de Physique Théorique et des Hautes Energies, Orsay, “Dernières des Etats-Unis”
- [417] May 17, 1989: High-Energy Physics Journal Club, UCLA, “The SSC: Science, Technology, Politics”
- [416] May 13, 1989: Invited Talk, Yale University Department of Physics Graduate School Reunion, “Supercollider Physics”
- [415] May 1, 1989: Invited Paper, Spring Meeting of the American Physical Society, Baltimore, “Scientific Issues for the Supercollider”
- [414] April 24, 1989: Public Lecture, Walla Walla College, “Supercollider”
- [413] April 24, 1989: Physics Department Seminar, Walla Walla College, “How to Cheat at Quantum Mechanics”
- [412] April 5, 1989: Symposium on Particle Identification at High-Luminosity Hadron Colliders, Fermilab, “Particle Identification and Supercollider Physics”
- [411] April 4, 1989: Public Lecture, University of Tulsa, “The Supercollider”
- [410] April 4, 1989: Physics Department Colloquium, University of Tulsa, “Supercollider Physics”
- [409] March 17, 1989: IV European Physical Society Seminar on International Research Facilities, Zagreb, Yugoslavia, “The Superconducting Super Collider: A New Instrument for Particle Physics”
- [408] March 16, 1989: XXIV Rencontre de Moriond, Les Arcs, France, “Status of the SSC”
- [407] March 15, 1989: Public lecture, Hôtel de la Cachette, Les Arcs, France, “Les deux frontières de la physique: de l’infiniment petit à l’infiniment grand”
- [406] January 18, 1989: Physics Department Colloquium, University of Michigan, “Supercollider Physics”
- [405] January 15, 1989: Annual Meeting of the American Association for the Advancement of Science, the American Association of Physics Teachers, and the American Physical Society, San Francisco, Symposium on High Energy Physics: New Insights and New Aspirations, “The High-Energy Frontier”
- [404] January 9, 1989: Magnet Industrialization Program Phase I Technology Orientation Meeting, Lawrence Berkeley Laboratory, “SSC Overview”
- [403] November 29, 1988: Undergraduate Physics Seminar, University of California, Berkeley, “The Superconducting Super Collider”

- [402] November 28, 1988: Colloquium, Stanford Linear Accelerator Center, “SSC Project Status”
- [401] November 9, 1988: Keynote Address, IEEE Nuclear Science Symposium, Orlando, Florida, “The SSC Project: Science, Technology, Outlook”
- [400] October 19, 1988: Physics Department Colloquium, Boston University, “Supercollider Physics”
- [399] October 7, 1988: 1988 Symposium on Hadronic Matter in Collision, Tucson: “SSC: Science, Technology, Outlook”
- [398] September 28, 1988: Physics 39 Undergraduate Seminar, University of California, Berkeley, “The Superconducting Super Collider”
- [397] August 27, 1988: Workshop on SSC Experiments, Matsumoto, Japan, “SSC: Science, Technology, Outlook”
- [396] August 24, 1988: Particle Physics Seminar, Kyoto University, “SSC: Motivation, Status, Prospects”
- [395] August 22, 1988: Seminar, KEK, Japanese National Laboratory for High-Energy Physics, “SSC: Motivation, Status, Prospects”
- [394] August 22, 1988: High-energy Physics Seminar, Tsukuba University, “SSC: Motivation, Status, Prospects”
- [393] July 18, 1988: SLAC Summer Student Lectures, “Scientific Goals of the SSC”
- [392] June 27, 1988: 1988 Summer Study on High-Energy Physics in the 1990s, Snowmass, “Status of the SSC Project”
- [391] June 11, 1988: Neutrino-88, Tufts University, “Future Prospects with High-Energy Accelerators”
- [390] May 21, 1988: California Society of Physics Students Biennial Meeting, University of California, Irvine, “Supercollider!”
- [389] May 20, 1988: Physics Department Colloquium, University of California, Irvine, “Supercollider Physics”
- [388] May 5, 1988: Physics Department Colloquium, University of California, San Diego, “Supercollider Physics”
- [387] April 27, 1988: Special Physics Lecture, French-American International School, San Francisco, “La Physique des Particules”
- [386] April 19, 1988: *The Infinite Voyage* Discovery Lecture, Texas A&M University, “The Impact of the Supercollider”
- [385] April 18, 1988: Physics Department Colloquium, Cornell University, “Supercollider Physics”
- [384] March 29, 1988: Public Lecture, University of Dallas, “Supercollider!”
- [383] March 1, 1988: Physics Colloquium, Duke University, “Supercollider Physics”
- [382] March 1, 1988: High Energy Physics Seminar, University of North Carolina, Chapel Hill, “Heavy Flavors”
- [381] February 9, 1988: *The Infinite Voyage* Discovery Lecture, Physics Department Colloquium, Stanford University, “Supercollider!”

- [380] February 3, 1988: Physics Colloquium, University of California, Berkeley, “Supercollider Physics”
- [379] January 27, 1988: Physics Colloquium, Kansas State University, “Supercollider Physics”
- [378] January 26, 1988: Annual Meeting of the American Physical Society and American Association of Physics Teachers, Crystal City, Virginia, “Supercollider Physics”
- [377] January 6, 1988: LAMPF Colloquium, Los Alamos National Laboratory, “Supercollider Physics”
- [376] December 17, 1987: Physics Colloquium, University of Oregon, “Supercollider Physics”
- [375] December 3, 1987: Physics Colloquium, California Institute of Technology, “Supercollider Physics”
- [374] December 3, 1987: National Symposium on the SSC, Denver, Colorado, “The Meaning and Significance of the SSC: Potential New Discoveries”
- [373] December 2, 1987: Department of Energy Headquarters, Germantown, General Seminar, “The SSC” (two presentations)
- [371] November 20, 1987: Theoretical Physics Seminar – Phenomenology Series, CERN, Geneva, “Heavy Flavors”
- [370] November 19, 1987: Bernard Gregory Lecture, CERN, Geneva, “To explore the 1-TeV scale”
- [369] November 18, 1987: Conférence «Bernard Gregory», Ecole Polytechnique, Palaiseau, “La physique des particules: découvertes, éclaircissements, outils”
- [368] November 18, 1987: Séminaire de physique des hautes énergies, Ecole Polytechnique, Palaiseau, “Saveurs lourds”
- [367] November 16, 1987: Conférence «Bernard Gregory», Collège de France, Paris, “La physique à 40 TeV au supercollisionneur proton-proton”
- [366] November 6, 1987: *The Infinite Voyage* Discovery Lecture, Johns Hopkins University, “Supercollider!”
- [365] November 5, 1987: Solomon Kasper Memorial Lecture, Kenyon College, Gambier, Ohio, “Elementary Particle Physics through the 1990s : the Superconducting Super Collider”
- [364] November 5, 1987: Physics Colloquium, Kenyon College, Gambier, Ohio, “Quantum Mechanics and Quarkonium”
- [363] November 5, 1987: Wellesley College Alumni Club of Chicago, Fermilab, “Elementary Particle Physics and Fermilab”
- [362] October 16, 1987: SSC Central Design Group Design Seminar, “Highlights of the ICFA Meeting”
- [361] October 15, 1987: Physics Department Colloquium, University of California, Santa Cruz : “Supercollider Physics”
- [360] October 14, 1987: Chicago High-Tech Association Symposium on the SSC : “The Science of the Supercollider”
- [359] October 13, 1987: Public Lecture, Southern Nazarene University, Bethany, OK : “Supercollider!”
- [358] October 13, 1987: Student Seminar, Southern Nazarene University, Bethany, OK : “Doing Science in the Large Laboratories”

- [357] October 9, 1987: Meeting of the Ohio Section of the American Physical Society, Youngstown State University : “Elementary Particle Physics and the Superconducting Super Collider”
- [356] September 30, 1987: Physics Department Colloquium, University of Colorado, Boulder, “Supercollider Physics”
- [355] September 30, 1987: Informal High Energy Physics Seminar, University of Colorado, Boulder, “Physics of the 1-TeV Scale”
- [354] September 23, 1987: Physics 290E Seminar, University of California, Berkeley, “Physics of the 1-TeV Scale”
- [353] September 18, 1987: Fermilab Auditorium Lecture Series, “Supercollider!”
- [352] September 10, 1987: Four-dimensional Physics Seminar, Lawrence Berkeley Laboratory, “The Stanford Symposium on Heavy Flavors”
- [351] September 5, 1987: International Symposium on Production and Decay of Heavy Flavors, Stanford University : “Conference Summary”
- [350] August 12-14, 1987: SLAC Summer Institute : Looking beyond the  $Z^0$ , “Hadron Colliders (Theoretical),” three lectures
- [347] July 10, 1987: Mini-Symposium on the Occasion of the Tenth Anniversary of the Upsilon ( $b$ -Quark), Fermilab, “ $B$ 's in Weak Interactions.”
- [346] June 12, 1987: Plenary Meeting of the European Committee on Future Accelerators, CERN, “New Facilities in the USA”
- [345] May 22, 1987: Annual Meeting of the Fermilab Industrial Affiliates, “Particle Physics in the Twenty-first Century”
- [344] May 11, 1987: From Colliders to Super Colliders Workshop, University of Wisconsin, Madison, “Survey of Tevatron Fixed-Target Physics”
- [343] May 5, 1987: Canada and the SSC Workshop, Carleton University, Ottawa, “Physics at the SSC”
- [342] April 25, 1987: South Dakota Academy of Sciences Annual Meeting, Aberdeen, “The Superconducting Super Collider”
- [341] April 24, 1987: Public Lecture, South Dakota State University, Brookings, “The Superconducting Super Collider”
- [340] April 20, 1987: Society of Physics Students Public Lecture, University of Iowa, “Supercollider! Meeting the Future Head On”
- [339] April 20, 1987: Physics Department Colloquium, University of Iowa, “Supercollider Physics”
- [338] April 14, 1987: Adler Planetarium Evening Lecture Series, Chicago, “Particle Physics Through the 1990s”
- [337] April 6, 1987: Institute of Physics Spring Meeting on Nuclear and Particle Physics, University of Birmingham, England, “News from the USA”
- [336] March 21, 1987: XXIIe Rencontres de Moriond, Les Arcs, Savoie, “Conference Summary”
- [335] March 20, 1987: XXIIe Rencontres de Moriond, Les Arcs, Savoie, “Status Report : The Tevatron and the SSC”

- [334] March 13, 1987: Theoretical Physics Seminar, Ecole Polytechnique, Palaiseau, “Physics of the SSC”
- [333] March 12, 1987: Séminaire Commun – Paris VI-VII – Ecole Normale Supérieure, LPTHE Jussieu, “La Physique au Supercollisionneur”
- [332] February 27, 1987: Physics Department Colloquium, University of Virginia : “Supercollider Physics”
- [331] February 24, 1987: High Energy Physics Seminar, University of Minnesota : “Physics Opportunities of the SSC”
- [330] February 16, 1987: Annual Meeting of the American Association for the Advancement of Science, Chicago : “A Theoretical View of Elementary Particle Physics”
- [329] February 14, 1987: AAAS Youth Symposium, Chicago : “Particle Physics in the 1990s : the Superconducting Supercollider”
- [328] February 2–5, 1987: 8th Nuclear and Particle Physics Summer School, Launceston, Tasmania : “Recent Results from Fermilab Experiments,” four lectures
- [324] January 30, 1987: Physics Department Colloquium, University of Melbourne : “Supercollider Physics”
- [323] January 16, 1987: Friday Afternoon Physics Lecture, University of Chicago, “Supercollider Physics.”
- [322] January 13, 1987: Physics Seminar, Lawrence University : “Quantum Mechanics and Heavy Quark Interactions.”
- [321] January 12, 1987: Science Hall Colloquium, Lawrence University : “Supercollider Physics.”
- [320] November 21, 1986: Workshop on a Northeast America Site for the SSC, Syracuse University, “The SSC : Science.”
- [319] October 20, 1986: Physics Department Colloquium, University of Washington : “Supercollider Physics.”
- [318] September 19, 1986: Elementary Particle Physics Seminar, MIT : “Signatures for Technicolor.”
- [317] October 1986 : Fermilab Academic Lecture Series : “Discrete Physics,” five lectures.
- [312] July 3, 1986: VIth International Conference on  $\bar{p}p$  Interactions, Aachen, “The SSC : Scientific Motivation and Technical Progress”
- [311] June 24, 1986: Laboratoire de Physique Théorique et Hautes Energies, Orsay, “Signatures for Technicolor”
- [310] June 18, 1986: XVII International Symposium on Multiparticle Dynamics, Seewinkel, Austria, “Beyond the Standard Model”
- [309] May 15, 1986: 7th Vanderbilt High Energy Physics Conference, Nashville, “To Explore the 1-TeV Scale”
- [308] April 29, 1986: High Energy Physics Seminar, SUNY, Stony Brook, “Supercollider Physics”
- [307] April 24, 1986: AAPT Conference on the Teaching of Modern Physics, Fermilab, “Elementary Particle Physics : Discoveries, Insights, and Tools”

- [306] April 4, 1986: Fermilab Beam Dump Workshop, “Superparticles”
- [305] November 12, 1985: High Energy Theory Seminar, Purdue University, “Signatures for Technicolor”
- [304] January 28 – February 5, 1986 : Winter School in Theoretical Physics, Panchgani, India, “Supercollider Physics,” (six lectures)
- [298] October 17, 1985: Central States Universities, Inc., Symposium on New Opportunities in Science, Argonne National Laboratory, “The Superconducting Super Collider”
- [297] October 8, 1985: Max-Planck-Institut, Munich, “Supercollider Physics”
- [296] October 1–4, 1985: International School of Elementary Particle Physics, Kupari–Dubrovnik, Yugoslavia, “Physics at the Superconducting Super Collider,” five lectures
- [291] September 19, 1985: Lawrence Berkeley Laboratory Research Progress Meeting, “Signatures for Technicolor”
- [290] August 7, 1985: SLAC Summer Institute and Topical Conference, “Supersymmetry at Very High Energies”
- [289] July 11, 1985: DOE Lab-Wide Review, Fermilab, “Fermilab Physics in the Contemporary Context”
- [288] July 1, 1985: Fermilab Summer Students Lecture, “Elementary Particles and Forces”
- [287] May 15, 1985: Elementary Particle Physics Seminar, Centre d’Etudes Nucléaires de Saclay, “La Physique à 40 TeV au Super Collisionneur  $p^{\pm}p$ ”
- [286] April 17, 1985: Chautauqua Short Course in Elementary Particle Physics, Argonne National Laboratory, “The Fundamental Particles : Their Properties and Interactions; The Standard Model,” two lectures
- [284] April 2, 1985: Illinois Institute of Technology Physics Colloquium, “Supercollider Physics”
- [283] March 18, 1985: Oregon Workshop on Super-High Energy Physics, “New Collider Results : Reports from Aosta and Tsukuba” (with Keith Ellis)
- [282] March 15, 1985: Symposium on Physics of Proton-Antiproton Collisions, Tsukuba, “Supercollider Physics”
- [281] March 11, 1985: University of Tokyo Theoretical Physics Seminar, “Search for Supersymmetric Particles”
- [280] March 6, 1985: Rutgers University Physics Colloquium, “Supercollider Physics”
- [279] February 21, 1985: Arizona State University Physics Colloquium, “Supercollider Physics”
- [278] February 20, 1985: University of Arizona Physics Colloquium, “Supercollider Physics”
- [277] February 14, 1985: Pennsylvania State University Physics Colloquium, “Supercollider Physics”
- [276] February 11, 1985: University of Illinois at Chicago Theory Seminar, “Search for Supersymmetry”
- [275] January 18, 1985: J. D. Jackson Fest, University of California, Berkeley, “Testing Weak Interactions”



- [274] January 22 – February 1, 1985 : Summer School in Theoretical Physics, Stellenbosch, South Africa, nine lectures on “QCD near the Confinement Limit”
- [265] November 30, 1984: Fermilab Collider Physics Journal Club, “Technicolor at the Tevatron”
- [264] October 26, 1984: Fermilab Collider Physics Journal Club, “Electroweak Physics : The Standard Model”
- [263] October 17, 1984: University of Texas Physics Colloquium, “Supercollider Physics”
- [262] October 5, 1984: Columbia University Physics Colloquium, “Supercollider Physics”
- [261] September 24, 1984: Cornell University Physics Colloquium, “Supercollider Physics”
- [260] September 13, 1984: CDF Offline Workshop, Fermilab, “Physics Prospects for the Tevatron Collider”
- [259] August 22, 1984: U.S. Summer School on High-Energy Particle Accelerators, Fermilab, “The Standard Model and Beyond”
- [258] July 13, 1984: Summary Talk, Division of Particles and Fields Summer Study on the Design and Utilization of the Superconducting Super Collider, Snowmass, “Energy and Luminosity Issues”
- [257] June 15, 1984: Theoretical Advanced Study Institute, University of Michigan, “Estimating Cross Sections for Old and New Physics in Hadron Colliders”
- [256] June 5, 1984: Workshop on Electroweak Symmetry Breaking, Lawrence Berkeley Laboratory, “Supercollider Physics”
- [255] June 1, 1984: Wingspread Meeting on Fifty Years of Weak Interactions, “Future Studies of Weak Interactions”
- [254] April 5, 1984: Physics Department Colloquium, University of Rochester, “Physics Opportunities at the Superconducting Super Collider”
- [253] March 29, 1984: Invited Paper, March Meeting of the American Physical Society, Detroit, “Elementary Particle Physics : Current Understanding and Open Questions”
- [252] March 23, 1984: Joint Experimental Theoretical Seminar, Fermilab, “Supercollider Physics”
- [251] March 19, 1984: Colloquium, Stanford Linear Accelerator Center, “Supercollider Physics”
- [250] March 14, 1984: Elementary Particle Physics Seminar, UCLA, “Supercollider Physics”
- [249] March 8, 1984: Enrico Fermi Institute Seminar, University of Chicago, “Why the Superconducting Supercollider?”
- [248] February 13, 1984: Workshop on  $\bar{p}p$  Options for the Supercollider, University of Chicago, “Physics of the SSC”
- [247] January 24, 1984: Workshop on Physics Beyond 100 GeV, Institute for Theoretical Physics, Santa Barbara, “Physics of the SSC”
- [246] January 5, 1984: Research Progress Meeting, Lawrence Berkeley Laboratory, “Supercollider Physics”
- [245] December 7, 1983: Physics Department Colloquium, Case-Western Reserve University, “Supercollider Physics”

- [244] November 30, 1983: Physics Department Colloquium, Indiana University, “Supercollider Physics”
- [243] November 15, 1983: Physics Department Colloquium, Ohio State University, “Supercollider Physics”
- [242] November 2, 1983: High-Energy Physics Seminar, University of Maryland, “Search for Supersymmetric Particles”
- [241] October 12, 1983: Joint Experimental Theoretical Seminar, Fermilab, “Auguries and Portents”
- [240] October 5, 1983: Seminar for new graduate students, University of Chicago, “The Supercollider Project”
- [239] September 30, 1983: Physics at the SSC Discussion Group, Fermilab, “Why  $\sqrt{s} = 40$  TeV?”
- [238] September 7, 1983: International Workshop on Weak Interactions, Talloires, France, “Weak Decays of Heavy Quarks”
- [237] April 15, 1983: Annual Meeting, Chicago and Illinois Sections of the American Association of Physics Teachers, “Fundamental Particles and Fundamental Forces”
- [236] February 17, 1983: Enrico Fermi Institute Seminar, University of Chicago, “Proton Instability”
- [235] January 27, 1983: Enrico Fermi Institute Seminar, University of Chicago, “Evidence for Intermediate Bosons”
- [234] November 5, 1982: Seminar for New Graduate Students, University of Chicago, “Beyond the Standard Model”
- [233] September 25, 1982: Annual Meeting of University of Chicago Alumni, Fermilab, “The Two Frontiers of Physics”
- [232] September 17, 1982: Europhysics Study Conference on Multibody Phenomena in Strong, Electromagnetic, and Weak Interactions, Erice, Summary Talk, “Hadron Jets in Perspective”
- [231] June 15, 1982: Max-Planck-Institut, Munich, “The Force Between Quarks”
- [230] June 1–2, 1982: XXII Kraków School of Theoretical Physics, Zakopane, “Quarkonium Physics,” two lectures
- [228] May 28, 1982: Institute of Nuclear Physics, University of Warsaw, “The Physics of Quarkonium”
- [227] May 7, 1982: Centre de Physique Théorique, CNRS-Marseille, “The Force between Quarks”
- [226] May 6, 1982: Laboratoire de Physique Théorique, Faculté des Sciences, Nice, “La Physique du Quarkonium”
- [225] March 26, 1982: Netherlands National High-Energy Physics Seminar, NIKHEF, Amsterdam, “Perspectives on Hadron Structure”
- [224] March 24, 1982: Laboratoire de Physique Corpusculaire, Collège de France, “La Spectroscopie des Mésons Lourds”
- [223] March 15, 1982: XVII Rencontre de Moriond, Les Arcs, “Why Do  $e^+e^-$  Experiments?”
- [222] February 26, 1982: Café-Club, Laboratoire de Physique Théorique, École Normale Supérieure, Paris, “Désintégrations des Protons”

- [221] February 12, 1982: High-Energy Theory Seminar, Oxford University, “The Force between Quarks”
- [220] February 11, 1982: Nimrod Lecture, Rutherford-Appleton Laboratory, “The Force between Quarks”
- [219] February 9, 1982: Theoretical Physics Seminar, Imperial College, London, “The Force between Quarks”
- [218] January 28, 1982: Laboratoire de Physique Théorique, École Normale Supérieure, Paris, “La Force Entre Quarks”
- [217] January 15, 1982: Institut des Sciences Nucléaires, Grenoble, “Quarkonium Quantum Mechanics”
- [216] November 17, 1981: Laboratoire de Physique Théorique et Hautes Énergies, Orsay, “The Force between Quarks”
- [215] September 24, 1981: Meeting on Science Transfer, International Center for Theoretical Physics, Trieste, “International Aspects of Fermilab”
- [214] June 5, 1981: Universities Research Association Trustees Meeting, “Fermilab Physics in 1981”
- [213] August 29–September 11, 1981 : École d’Été de Physique Théorique, Les Houches, “Models for Hadrons,” ten lectures
- [203] June 4, 1981: Physics Department Colloquium, Florida State University, “Quarkonium Quantum Mechanics”
- [202] June 4, 1981: High-Energy Physics Seminar, Florida State University, “The Force Between Quarks”
- [201] May 30, 1981: Physics in Collision, Blacksburg, “What We Can Learn from Lepton-Quark Scattering”
- [200] May 9, 1981: Fermilab Saturday Morning Physics, “The Forces of Nature and Their Carriers”
- [199] April 24, 1981: Annual Meeting, Fermilab Users Organization, “Focus on Physics in 1981”
- [198] April 2, 1981: Theoretical Seminar, Lawrence Berkeley Laboratory, “Further Adventures on the Quarkonium Frontier”
- [197] March 17, 1981: Fermilab Journal Club, “Observation of Parity Violation in Atomic Thallium,” by P. Bucksbaum, et al. [*Phys. Rev. Lett.* 46, 640 (1981)], and “Measurement of Parity Nonconservation in Atomic Bismuth,” by Hollister, et al. [*Phys. Rev. Lett.* 46, 643 (1981)]
- [196] February 28, 1981: Fermilab Saturday Morning Physics, “The Forces of Nature and Their Carriers”
- [195] February 26, 1981: Fermilab Colliding Detector Facility Group Meeting, “Low-Luminosity Physics Possibilities”
- [194] February 18, 1981: Physics Department Colloquium, University of Notre Dame, “Gauge Theories of the Strong, Weak, and Electromagnetic Interactions”
- [193] December 9, 1980: Physics Department Colloquium, Western Michigan University, “Quarkonium Quantum Mechanics”

- [192] November 22, 1980: Fermilab Saturday Morning Physics, “The Forces of Nature and Their Carriers”
- [191] November 15, 1980: Workshop on a  $50\oplus 50$  GeV  $e^+e^-$  Collider, Cornell University, “Physics of  $e^+e^-$  Collisions at  $E_{\text{cm}} = 100$  GeV”
- [190] October 22, 1980: Physics Department Colloquium, Northwestern University, “Quantum Mechanics and Quarkonium”
- [189] October 14, 1980: Theoretical Physics Seminar, Purdue University, “The Force between Quarks”
- [188] October 8, 1980: High-Energy Physics Seminar, University of Chicago, “The Force between Quarks”
- [187] October 7, 1980: Fermilab Journal Club, “Additional Evidence for Fractional Charge of  $e/3$  on Matter”
- [186] October 6, 1980: Physics Department Colloquium, Iowa State University, “Quarkonium Quantum Mechanics”
- [185] August 4, 1980: Fermilab Summer Students’ Lecture, “Theories of Elementary Particles”
- [184] September 1980 : Fermilab Academic Lectures, “Introduction to Gauge Theories,” six lectures
- [178] July 18, 1980: XX International Conference on High Energy Physics, Madison, Parallel Session C7, “Onium Theory and Spectroscopy,” Organizer’s Introductory Remarks
- [177] July 2–13, 1980: NATO Advanced Studies Institute on Techniques and Concepts of High-Energy Physics, St. Croix, USVI, “Introduction to Gauge Theories,” six lectures
- [171] June 17, 1980: High-Energy Physics Seminar, University of Minnesota, “Neutrino Masses?”
- [170] June 9, 1980: Centre d’Études Nucléaires, Saclay, “Informal Review of Neutrino Oscillations : Experiment and Theory”
- [169] June 6, 1980: Laboratoire de Physique Théorique et Hautes Énergies, Orsay, “Bound States of Heavy Quarks”
- [168] June 5, 1980: Laboratoire de l’Accélérateur Linéaire, Orsay, “What’s New in Quarkonium and Gluonium”
- [167] June 3, 1980: Centre d’Études Nucléaires, Saclay, “Heavy Quark Decays”
- [166] June 3, 1980: École Polytechnique, Palaiseau, “Informal Review of Quarkonium”
- [165] June 2, 1980: Theoretical Division Seminar, CERN, Geneva, “Quarkonium”
- [164] May 29, 1980: Laboratoire de Physique Théorique et Hautes Énergies, Orsay, “Charmed Meson Decays”
- [163] May 1, 1980: Woods Hole Panel Visit, Fermilab, “Fermilab Research Accomplishments”
- [162] May 1, 1980: Fermilab Workshop on Hadron and Photon Beams for the Tevatron, “Tasty Flavors”
- [161] April 25, 1980: Physics Department Colloquium, Northern Illinois University, “Quantum Mechanics and Quarkonium”
- [160] April 17, 1980: Purdue University Chapter of  $\Sigma\Pi\Sigma$  Awards banquet, “Elementary Particle Physics : In Search of Simplicity”

- [159] April 17, 1980: Physics Department Colloquium, Purdue University, “Quarkonium Quantum Mechanics”
- [158] March 28, 1980: Joint Experimental Theoretical Seminar, Fermilab, “Quarkonium Quantum Mechanics”
- [157] March 21, 1980: McGill University Physical Society Colloquium, “Quantum Mechanics and Quarkonium”
- [156] March 6, 1980: Theoretical Seminar, Lawrence Berkeley Laboratory, “Remarks on Charmed Meson Decays”
- [155] February 29, 1980: Theoretical Physics Seminar, Institute for Advanced Study, Princeton, “Bound States of Heavy Quarks”
- [154] February 28, 1980: Physics Colloquium, Lehigh University, “Quantum Mechanics and Quarkonium”
- [153] February 14, 1980: High-Energy Physics Seminar, University of Utah, “Bound States of Heavy Quarks and Antiquarks”
- [152] January 17, 1980: High-Energy Physics Division Seminar, Argonne National Laboratory, “Charmed Meson Decays : A Status Report”
- [151] December 11, 1979: Public Lecture, Illinois Wesleyan University, “The Fundamental Forces of Nature”
- [150] December 11, 1979: Undergraduate Physics Seminar, Illinois Wesleyan University, “High-Energy Physics at Fermilab”
- [149] December 10, 1979: Fermilab Soirée, “Composite Quarks and Leptons?”
- [148] December 5, 1979: Department of Energy Review, Fermilab, “Theoretical Significance of Recent Fermilab Experiments”
- [147] November 1, 1979: High-Energy Physics Lunch Seminar, University of Chicago, “Prospects for Physics with  $\tau$ -neutrinos”
- [146] October 29, 1979: Workshop on Neutrino Bubble Chamber Physics at Tevatron Energies, Argonne National Laboratory, “Third-Generation Neutrino Experiments”
- [145] October 23, 1979: Fermilab Journal Club, “Observation of Cosmic-Ray Antiprotons”
- [144] October 4, 1979: Enrico Fermi Institute Seminar, University of Chicago, “Current Issues in High-Energy Physics”
- [143] September 28, 1979: Joint Experimental Theoretical Seminar, Fermilab, “Charmed-Meson Decays and the Structure of the Charged Weak Current”
- [142] August 24, 1979: International Symposium on Lepton and Photon Interactions at High Energies, Fermilab, “Interpretation of the Spectra of Heavy Quark-Antiquark Bound States”
- [141] June 26, 1979: Fermilab Meeting of the National Association of Science Writers, “Current Issues in High-Energy Physics”
- [140] May 4, 1979: Fermilab Colliding Detector Group Meeting, “Asymmetries in Intermediate Boson Decay”
- [139] April 2, 1979: Theoretical Seminar, University of Pennsylvania, “Beauty and Quarkonium”

- [138] March 22, 1979: Secret Seminar, Lawrence Berkeley Laboratory, “Inverse-Scattering Approach to Quarkonium Potentials”
- [137] March 2, 1979: University of Chicago Seminar for First-Year Graduate Students, “New Particle Phenomenology”
- [136] February 16, 1979: Phenomenology Seminar, Massachusetts Institute of Technology, “Charm, Beauty, and Quarkonium”
- [135] January 23, 1979: High-Energy Physics Seminar, University of Michigan, “About the Fifth Quark”
- [134] December 7, 1978: Physics Department Colloquium, University of Toronto, “Quantum Mechanics of the New Heavy Particles”
- [133] October 26, 1978: High-Energy Physics Seminar, University of Chicago, “High-Energy Physics in China”
- [132] October 24, 1978: Special Seminar, Fermilab (with A. E. Brenner), “A Scientific/Cultural Visit to the People’s Republic of China”
- [131] October 6, 1978: Theory Seminar, University of Minnesota, “Impressions of High-Energy Physics in the Orient”
- [130] September 11, 1978: Shanghai Branch of Academia Sinica, “Quantum Mechanics and the Upsilon Family”
- [129] September 8, 1978: Institute for High Energy Physics, Academia Sinica, Beijing, “Inverse Scattering Approach for Confining Potentials”
- [128] September 7, 1978: Institute for High Energy Physics, Academia Sinica, Beijing, “Weak Decays of  $c$ - and  $b$ -Quarks”
- [127] September 5, 1978: Institute for High Energy Physics, Academia Sinica, Beijing, “Quarkonium Quantum Mechanics”
- [126] September 1, 1978: Seoul Symposium on Elementary Particle Physics, “Upsilon and the Quarks within Them”
- [125] August 25, 1978: XIX International Conference on High Energy Physics, Tokyo, “Weak Decays of Charmed Particles and  $b$ -quarks”
- [124] August 22, 1978: Tokyo Metropolitan University, “Status of Charmed Particles”
- [123] August 21, 1978: Tokyo Metropolitan University, “Weak Decays of the  $b$ -quark”
- [122] August 21, 1978: Tokyo Metropolitan University, “Quarkonium Quantum Mechanics”
- [121] August 17, 1978: International Meeting on Frontier of Physics, Singapore, “Quantum Mechanics and Quarkonium”
- [120] August 4, 1978: Workshop on High-Energy Photon Beams, Fermilab, “New Phenomena in High-Energy  $\gamma N$  Collisions”
- [119] July 28, 1978: Theoretical Seminar, Lawrence Berkeley Laboratory, “Weak Interactions of the  $b$ -quark”
- [118] February 28, 1978: IBM Lecture, Williams College, “The Search for Simplicity in Elementary Particle Physics”

- [117] February 28, 1978: Physics Department Colloquium, Williams College, “The New Heavy Particles”
- [116] February 16, 1978: Physics Department Colloquium, University of California, Riverside, “The New Heavy Particles”
- [115] February 1, 1978: Physics Department Colloquium, State University of New York, Stony Brook, “The New Heavy Particles”
- [114] January 26, 1978: Annual Meeting of the American Physical Society, San Francisco, “What is the  $\Upsilon$ ?”
- [113] January 24, 1978: Research Progress Meeting, Lawrence Berkeley Laboratory, “Quarkonium Quantum Mechanics”
- [112] January 20, 1978: Physics Department Colloquium, Argonne National Laboratory, “The New Heavy Particles”
- [111] January 17, 1978: Orbis Scientiae, Coral Gables, Florida, “New (Quark) Flavors”
- [110] January 6, 1978: Theoretical Physics Seminar, Princeton University, “Quarkonium Quantum Mechanics”
- [109] December 1, 1977: Physics Department Colloquium, University of Chicago, “The New Heavy Particles”
- [108] Fall 1977 : University of Chicago, “The Physics of Charmed Particles,” five lectures
- [103] November 28, 1977: Physics Department Colloquium, Brown University, “The New Heavy Particles”
- [102] November 4, 1977: Joint Experimental Theoretical Seminar, Fermilab, “Quarkonium Quantum Mechanics”
- [101] October 12, 1977: Physics Department Colloquium, University of Minnesota, “The New Heavy Particles”
- [100] September 12-14, 1977: XI International School for Young Scientists on High-Energy Physics and Relativistic Nuclear Physics, Gomel, Byelorussia, “Five Lectures on Charmed Particles”
- [95] September 7, 1977: Special Seminar, Laboratory for Theoretical Physics, JINR, Dubna, “The New Particles at  $10 \text{ GeV}/c^2$ ”
- [94] April 7, 1977: High-Energy Physics Division Seminar, Argonne National Laboratory, “The Higgs Boson and Weak Interactions at High Energies”
- [93] March 30, 1977: High Energy Discussion Group Meeting, Brookhaven National Laboratory, “What May We Expect at ISABELLE Energies and Beyond?”
- [92] March 18, 1977: XII Rencontre de Moriond, Flaine, “Summary of the Leptonic Interactions Session”
- [91] March 15, 1977: XII Rencontre de Moriond, Flaine, “Color and the Drell-Yan Process”
- [90] March 12, 1977: XII Rencontre de Moriond, Flaine, “Issues in Charmed Particle Spectroscopy”
- [89] March 4, 1977: TH Division Seminar, CERN, Weak Interactions at High Energy and the Mass of the Higgs Boson”

- [88] March 1, 1977: TH Division Seminar, CERN, “Production and Detection of Intermediate Vector Bosons”
- [87] February 16, 1977: Fermilab Colloquium, “Production and Detection of Intermediate Vector Bosons”
- [86] February 2, 1977: High-Energy Physics Seminar, University of Chicago, “Production and Detection of Intermediate Vector Bosons”
- [85] December 1, 1976: High-Energy Physics Seminar, Iowa State University, “Spectroscopy of Charmed Baryons”
- [84] November 9, 1976: HETEP Seminar, University of Illinois, “Production and Detection of Intermediate Vector Bosons”
- [83] October 25, 1976: High-Energy Physics Seminar, University of Michigan, “Production and Detection of Intermediate Vector Bosons in  $pp$  and  $\bar{p}p$  Collisions”
- [82] September 30, 1976: Special High-Energy Physics Seminar, Brookhaven National Laboratory, “Spectroscopy of Charmed Baryons”
- [81] August 13, 1976: Joint Experimental Theoretical Seminar, Fermilab, “Prospectus : Charmed Baryon Spectroscopy”
- [80] June 4, 1976: Joint Experimental Theoretical Seminar, Fermilab, “Weak Interactions at FermiClash”
- [79] March 3, 1976: Second International Conference on New Results in Particle Physics, Vanderbilt University, Summary Talk
- [78] January 16, 1976: Joint Experimental Theoretical Seminar, Fermilab, “The Discovery of Heavy Leptons and Other New Particles—A Fantasy”
- [77] October 6, 1975: High-Energy Physics Seminar, University of Chicago, “Survey of Strong-Interaction Physics”
- [76] September 18, 1975: Invited Talk at the Fermilab Bubble Chamber Symposium
- [75] August 29, 1975: 1975 Meeting of the Division of Particles and Fields of the American Physical Society, University of Washington, “Strong Interaction : Theory” (rapporteur talk)
- [74] August 19, 1975: Gordon Research Conference, Meriden, New Hampshire, “High-Energy Collisions in Outline”
- [73] July 25, 1975: TH Division Seminar, CERN, “The Hunt for Charmed Mesons”
- [72] July 21, 1975: Nimrod Lecture, Rutherford High Energy Laboratory, “The Structure of Multiple Production”
- [71] July 14, 1975: VI International Colloquium on Multiparticle Dynamics, Oxford, “An Agenda for Correlations”
- [70] June 18, 1975: Institute of Nuclear Physics / Warsaw University Joint High-Energy Physics Seminar, “The Structure of Multiple Production”
- [69] May 3, 1975: Annual Meeting of the Fermilab Users Organization, “The Future of Strong Interactions”



- [68] April 25, 1975: High-Energy Physics Seminar, University of Minnesota, “The Structure of Multiple Production”
- [67] April 23, 1975: Physics Department Colloquium, Northwestern University, “The Charm Chase”
- [66] April 9, 1975: Carnegie-Mellon–Pittsburgh High-Energy Physics Seminar, “Nonleptonic Decays of Charmed Mesons”
- [65] April 7, 1975: High-Energy Physics Seminar, University of Chicago, “Nonleptonic Decays of Charmed Mesons”
- [64] April 2, 1975: Theoretical Physics Seminar, Cornell University, “Nonleptonic Decays of Charmed Mesons”
- [63] March 4, 1975: Theoretical Physics Seminar, Fermilab, “How to Find Charmed Mesons—*Experimentally*”
- [62] January 31, 1975: Joint Experimental-Theoretical Seminar, Fermilab, “The Structure of Multiple Production”
- [61] December 13, 1974: Joint Experimental-Theoretical Seminar, Caltech, “Isolating the Exchanges in Multiple Production”
- [60] December 11, 1974: Theory Seminar, Stanford Linear Accelerator Center, “Isolating the Exchanges in Multiple Production”
- [59] December 10, 1974: Research Progress Meeting, Lawrence Berkeley Laboratory, “Isolating the Exchanges in Multiple Production”
- [58] December 6, 1974: Joint Experimental-Theoretical Seminar, University of California, Los Angeles, “Isolating the Exchanges in Multiple Production”
- [57] November 18, 1974: High-Energy Physics Seminar, University of Chicago, “Lessons from Correlations”
- [56] October 10, 1974: Enrico Fermi Institute Seminar, University of Chicago
- [55] October 9, 1974: Theory Seminar, University of Wisconsin, “Clustering and Quantum-Number Mobility”
- [54] May 14, 1974: High-Energy Physics Seminar, State University of New York, Stony Brook, “Cluster Models of Hadron Production”
- [53] May 1, 1974: Elementary Particle Seminar, University of Rochester, “Clustering in Multiple Production”
- [52] April 27, 1974: Experimental Meson Spectroscopy–1974, Boston, “Meson Spectroscopy and the Phenomenology of High-Energy Collisions”
- [51] February 5, 1974: High-Energy Physics Seminar, State University of New York, Stony Brook, “Two-Body Reactions near  $90^\circ$ ”
- [50] January 24, 1974: Particle Physics Seminar, Brookhaven National Laboratory, “Correlations in Particle Production”
- [49] January 17, 1974: High Energy Physics Colloquium, Argonne National Laboratory, “What Have We Learned from High-Energy Physics?”

- [48] December 19, 1973: Colloquium, National Accelerator Laboratory, “The Two-Component Picture of Particle Production”
- [47] November 30, 1973: National Accelerator Laboratory Topical Conference : *Phenomena at Large Transverse Momenta* (panelist)
- [46] August 16, 1973: Invited Talk, 1973 Meeting of the Division of Particles and Fields of the American Physical Society, “What Have We Learned from Very High Energy Experiments?”
- [45] August 27–September 1, 1973 : Canadian Institute for Particle Physics Summer School, Montréal, “Two-Component Models for Particle Production (three lectures)”
- [42] July 16, 1973: Elementary Particle Seminar, Eidgenössische Technische Hochschule, Zürich, “Correlations in Multiparticle Production at NAL and ISR Energies”
- [41] June 15, 1973: Gordon Research Conference, Plymouth, New Hampshire, “The Multiperipheral Model”
- [40] May 18, 1973: Princeton University / Institute for Advanced Study Joint Seminar, “Correlations in Multiparticle Production”
- [39] May 2, 1973: Cambridge Joint Theory Seminar, Harvard University, “Perspectives on Correlations”
- [38] March 28, 1973: International Conference on New Results from Experiments on High-Energy Particle Collisions, Vanderbilt University, “Perspectives on Correlations”
- [37] January 15, 1973: Theoretical Physics Seminar, State University of New York, Stony Brook, “Charge Transfer in Multiple Production”
- [36] December 9, 1972: National Accelerator Laboratory Topical Conference, *Quarks and Partons : What Good Are They?* (panelist)
- [35] November 30, 1972: High-Energy Theory Seminar, Argonne National Laboratory, “Understanding Pion-Deuteron Scattering at High Energy”
- [34] November 13, 1972: High-Energy Physics Seminar, University of Michigan, “Can We Interpret High-Energy Scattering on Deuterons?”
- [33] October 24, 1972: Experimental Theoretical Seminar, National Accelerator Laboratory, “Proton-Proton Elastic Scattering”
- [32] September 22, 1972: Friday Lunch Talk, National Accelerator Laboratory, “Deuteronomy and Revelations”
- [31] September 8, 1972: XVI International Conference on High Energy Physics, Chicago, “Theory and Practice of Deuteron Corrections”
- [30] June 5, 1972: High Energy Discussion Group Meeting, Brookhaven National Laboratory, “Physics with ISABELLE”
- [29] March 2, 1972: Elementary Particles Seminar, State University of New York, Stony Brook, “What Can Be Learned from Two-Body Inclusive Cross Sections?”
- [28] February 15, 1972: High-Energy Physics Seminar, University of Notre Dame, “What Can Be Learned from Two-Body Inclusive Cross Sections?”
- [27] February 15, 1972: High Energy Physics Division Colloquium, Argonne National Laboratory, “What Can Be Learned from Two-Body Inclusive Cross Sections?”

- [26] February 14, 1972: High-Energy Physics Seminar, University of Illinois, “What Can Be Learned from Two-Body Inclusive Cross Sections?”
- [25] November 10, 1971: High-Energy Physics Seminar, Carnegie-Mellon University, “Double Particle Exchange and Exotic Reactions”
- [24] October 14, 1971: Elementary Particles Seminar, State University of New York, Stony Brook, “Review of the International Symposium on Electron and Photon Interactions at High Energies”
- [23] September 21, 1971: High-Energy Physics Seminar, Nevis Laboratories, “Inclusive Reactions”
- [22] September 14, 1971: Elementary Particles Seminar, State University of New York, Stony Brook, “Topics of Current Interest in High-Energy Physics”
- [21] August 31, 1971: Rapporteur Talk, Meeting of the Division of Particles and Fields of the American Physical Society, Rochester, “Inclusive Reactions”
- [20] July 10, 1971: Topical Meeting on Inclusive Hadron Reactions, Rutherford High Energy Laboratory, “Multiparticle Reactions at Intermediate Energies”
- [19] June 25, 1971: High-Energy Physics Seminar, Rutherford High Energy Laboratory, “Regge Cut Contributions to Exotic Boson-Exchange Cross Sections”
- [18] June 10, 1971: Special Seminar, Laboratoire de Physique Théorique, Orsay, “Regge Cut Contributions to Exotic Boson-Exchange Cross Sections”
- [17] June 9, 1971: Special Seminar, Institute for Theoretical and Experimental Physics, Moscow, “Regge Cut Contributions to Exotic Boson-Exchange Cross Sections”
- [16] June 5, 1971: International Seminar on Binary Reactions of Hadrons at High Energies, Dubna, USSR, “Models for High-Energy Collisions of Hadrons”
- [15] May 6, 1971: Theoretical Physics Seminar, Argonne National Laboratory, “A New Regge Phenomenology”
- [14] April 23, 1971: Elementary Particle Seminar, Rutgers University, “Multiparticle Reactions at Intermediate Energies”
- [13] April 22, 1971: Elementary Particles Seminar, State University of New York, Stony Brook, “Report on the Caltech Conferences on Phenomenology and Hadron Physics at Intermediate Energies”
- [12] April 14, 1971: Elementary Particle Physics Seminar, Yale University, “Multiparticle Reactions at Intermediate Energies”
- [11] March 30, 1971: Caltech Workshop on Hadron Physics at Intermediate Energies, “Multiparticle Reactions at Intermediate Energies”
- [10] March 22, 1971: Theory Seminar, University of California, Berkeley, “A New Regge Phenomenology”
- [9] February 24, 1971: Theory Seminar, University of Wisconsin–Madison, “A New Regge Phenomenology of Inclusive Reactions”
- [8] February 17, 1971: Elementary Particles Seminar, State University of New York, Stony Brook, “A Regge Phenomenology for Inclusive Reactions”
- [7] January 23, 1971: High-Energy Physics Seminar, University of Pennsylvania, “The Approach to Limiting Fragmentation”

- [6] November 23, 1970: Theoretical Physics Seminar, State University of New York, Stony Brook, “Phenomenological Applications of Regge Cuts”
- [5] October 7, 1970: Elementary Particles Seminar, State University of New York, Stony Brook, “Decisive Tests of High-Energy Models”
- [4] January 22, 1970: Research Progress Meeting, Lawrence Radiation Laboratory, Berkeley, “Charged Pion Photoproduction and the  $J$ -Plane Jungle”
- [3] January 7, 1970: High Energy Physics Division Colloquium, Argonne National Laboratory, “Theory of  $\rho$ - $\omega$  Interference in  $\pi^+\pi^-$  Production”
- [2] August 18, 1969: Boulder Conference on High Energy Physics, “ $\rho$ - $\omega$  Interference”
- [1] July 29, 1969: Research Progress Meeting, Lawrence Radiation Laboratory, Berkeley (with Donald G. Coyne), “A New Theory of  $\rho$ - $\omega$  Interference”