
Selected General Audience Content of The Internet-First University Press¹

J. Robert Cooke
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Public lectures sponsored by
The Cornell Association of Professors Emeriti (C.A.P.E.)
<https://www.emeritus.cornell.edu>

Foundations of Muslim Extremism and the Marginalization and Violence Against Women

Barazangi, Nimat (Feminist, Gender, & Sexuality Studies)

<https://hdl.handle.net/1813/41332>

In this presentation she argues that Muslim women's issues are symptoms of the widespread crisis in understanding Islam. These issues, being the consequences of extremism on all fronts, are the active drive to understand the foundations of Muslim extremism. [58 min]

Cornell Apple Breeding: Taste the Apples of the Future

Brown, Susan K. (Horticulture)

<https://hdl.handle.net/1813/24423>

This is a description of the apple breeding program at the Geneva Agricultural Experiment Station in Geneva, NY. A busload of emeriti made the 50-mile trip. The process for releasing new varieties is discussed. Incidentally, Susan posits that apples were not native to the Garden of Eden. [47 min]

Small is Still Beautiful: Establishing a Micro-economic Agenda for Economic Growth and Development in sub-Saharan Africa

Christy, Ralph (Applied Economics)

<https://hdl.handle.net/1813/23625>

Cornell pioneered work in international development. A report on the earliest technical (rather than religious) assistance program with plant breeding in China during a famine <https://hdl.handle.net/1813/29080> was made possible with financial support from the International Education Board. There is also an economics paper <https://hdl.handle.net/1813/42407> by J. Lossing Buck (spouse of Pearl S. Buck of *The Good Earth* book fame). [54 min]

The First Ten Years of the Internet-First University Press and CAPE's Histories and Biographies Project

Cooke, J. Robert

<https://hdl.handle.net/1813/36253>

An Internet-based experiment in scholarly publishing (which published these lectures) has reached its ten-year mark. The Histories and Biographies Project of the emeritus faculty is described. This includes a large number of videos of oral histories of Cornell Faculty and a large collection of books, with an emphasis on Cornell's history. [81 min]

Glimpses of Cornell History, Vol 1

Cooke, J. Robert; King, Kenneth M.

<https://hdl.handle.net/1813/30565>

The issues and principles that guided the creation of The Internet-First University Press are presented. This is followed by a collage of snippets from thirteen IFUP videos featuring **M. H. (Mike) Abrams** [founding editor of

1 Online access to the full, 255-page *Directory*: <https://hdl.handle.net/1813/64826.2> If your browser doesn't accept this, use <https://hdl.handle.net/1813/64826> and select version 2 (dated 30Aug19).

the *Norton Anthology of English Literature*]; **Hans A. Bethe** [Nobel Laureate in physics, who elucidated how stars shine]; **Susan K. Brown** [an apple breeder, noted above]; **W. Donald Cooke** [a former dean of the Graduate School who was on Eisenhower's meteorological staff that advised on the scheduling of the D-Day landing at Normandy]; **Dale R. Corson** [Cornell's 8th President, a co-discoverer of an element in the periodic table, also led the development and deployment of airborne radar during WWII]; **Juris Hartmanis** [a Turing Award winner (known as the Nobel equivalent for the field of computer science) who played a major role in creating the field of computer science]; **Roald Hoffmann** [a Nobel Laureate in Chemistry, accomplished poet, and a person who was hidden in the attic of a Catholic school during WWII]; **Kenneth M. King** [played a pivotal political role in the creation of the Internet—and yes, Al Gore sponsored the legislation that funded the core infrastructure]; **Walter LaFeber** [an enormously popular teacher in History]; **Susan H. Murphy** [first woman in Ivy League to head Admissions & Financial Aid, who later became V.P. for Student Affairs]; **Robert C. Richardson** [another Nobel Laureate who studied ultra-low-temperature physics and was V.P. for Research at Cornell]; **Thomas Seeley** [reports on how honey bees communicate the direction and distance to a new hive]; and **Christine Shoemaker** [the first woman to be tenured in the College of Engineering]. [48 min]

Glimpses of Cornell History, Vol 2: The Kendal at Ithaca Connection

Cooke, J. Robert; King, Kenneth M.

<https://hdl.handle.net/1813/36698>

Snippets of Cornell faculty members who live (or lived) at Kendal at Ithaca, the first continuous-care retirement community in New York State. Cornell University has an informal relationship with it. Snippets of 20 residents covering a diverse range of interests are shown. [74 min]

How Birds Can Save the World

Fitzpatrick, John (Director of the Cornell Laboratory of Ornithology)

<https://hdl.handle.net/1813/42873>

Birds can save the World – so says John Fitzpatrick, the Louis Agassiz Fuertes Director of the Cornell Laboratory of Ornithology. In this lecture to the Cornell Association of Professors Emeriti, Fitzpatrick explains how. As part of the Laboratory's program called e-Bird, volunteers all over the world are reporting bird sightings. Based on this data, Federal and local agencies are setting aside land from development and making other changes to protect bird species and hence the environment. [58 min]

My Life as a Field Biologist: From Deer to Digital Book in 40 Short Years

Gavin, Thomas A. (Natural Resources)

<https://hdl.handle.net/1813/28280>

This lecture provides a panoramic reprise of his research career as a Field Biologist by way of four major projects, all using marked individuals to illuminate larger aspects of animal behavior and ecology. For example, he shows how some migrating birds return to the same location year after year. [89 min]

The Risks and Benefits of Shale Gas²

Ingraffea, Anthony (Civil and Environ. Engineering); Cathles, Lawrence (Earth and Atmospheric Science)

<https://hdl.handle.net/1813/41331>

In 2011, Robert Howarth, Renee Santoro, and Anthony Ingraffea published an estimated range of life-cycle methane emissions from development of natural gas, petroleum, and coal. They concluded that, even at the low end of their estimate, methane emissions from shale gas would make it the worst of the fossil fuels from a climate change point of view. [The escape of methane during fracking has been neglected in the evaluation of the environmental risks. Lawrence Cathles, in contrast, disagreed and concluded from his studies that methane emissions were at levels where natural gas was the best of all fossil fuels from a climate-change point of view.] [71 min]

2 [See a related lecture:]

Methane Emissions Make Shale Gas a Bridge to Nowhere

Howarth, Robert (Ecology and Evolutionary Biology)

<https://hdl.handle.net/1813/37990>

My research with Prof. Ingraffea indicates that when emissions of methane as well as carbon dioxide are considered, shale gas has perhaps the largest greenhouse gas footprint of any fossil fuel. [31 min]

Local Women Go To War: Civil War Nurses 1861-1865

Kammen, Carol (History)

<https://hdl.handle.net/1813/34538>

This lecture describes the hardships experienced by nurses from Ithaca, NY, during the Civil War. [44 min]

The Origin and History of the Internet

King, Kenneth M. (Provost in charge of Computing)

<https://hdl.handle.net/1813/22368>

This lecture traces the evolution of the Internet from its roots in higher education. This is a personal account of the political steps (rather than the hardware or software aspects) in the creation and evolution of a major technological development of our time by a pivotal person in the process. Bob Cooke introduces the speaker. [70 min]

Achieving Food Security for All in the Foreseeable Future

Pinstrup-Andersen, Per (Food, Nutrition and Public Policy)

<https://hdl.handle.net/1813/41456>

Large increases in cereal prices in 2007-08 raised questions about the ability of world agriculture to produce the food needed by future generations. Predictions about impending world famine and continued increases in food prices are plentiful but almost certain to be wrong. Today, the world is awash in cereals and prices have decreased rapidly during the last three years. [53 min]

The Rau Plow Model Collection at Cornell University and the Evolution of Plow Design: A Lecture

Rehkugler, Gerald E. (Biological and Environmental Engineering)

<https://hdl.handle.net/1813/22848>

In this lecture, Cornell professor emeritus Gerald Rehkugler tells the story of Cornell's Rau Model Plow Collection and illustrates the evolution of the plow over a vast time period. The Rau Collection was acquired in 1868 by the first Cornell president, Andrew Dickson White. The models trace the development of the plow from around 3000 B.C.E. to the mid-1860s. [43 min]

Honey Bee Democracy

Seeley, Thomas (Neurobiology and Behavior)

<https://hdl.handle.net/1813/28212>

Professor Thomas Seeley, Neurobiology and Behavior, reviews the history of behavioral studies of foraging honey bees, and then extends that understanding to the process by which swarming honey bees choose a new home. This Cornell-based research made exquisite usage of Appledore Island, where he and his students tracked individual honey bees engaged in finding new home sites; how the scout bees communicated their findings to other scout bees; and then how the bees reached a consensus decision of "the best" site. [57 min]

Animal Navigation: An Enduring Mystery

Walcott, Charles (Neurobiology & Behavior)

<https://hdl.handle.net/1813/40145>

Many animals move thousands of miles over the surface of the earth. Monarch butterflies return to a small place in Mexico to overwinter; Arctic Terns fly some 24,000 miles per year; and salmon return to the gravel beds in the streams where they themselves were hatched. [62 min]

Other General Audience Content (but not CAPE Lectures)

Birth of the American University

Frey, Brian (producer, at WSKG)

<https://hdl.handle.net/1813/36232>

Cornell: Birth of the American University chronicles the founding of one of the great institutions of learning in the United States, focusing on the two extraordinary men, Ezra Cornell and Andrew Dickson White, whose individual dreams and ambitions would unite to create a school that would transform Ithaca and the course of American higher education forever. Produced by Emmy Award-winner Brian Frey, *Cornell: Birth of the American University* utilizes film footage and dozens of rare photos from Cornell University archives to create a compelling look at the birth of an American legend. [61 min]

“I Can Do That!” Hans Bethe’s First 60 Years at Cornell

Bethe, Hans; Hershey, Edward (executive producer)

<https://hdl.handle.net/1813/84>

This video provides a brief overview of Hans Bethe’s life and career, from his childhood and early career in Germany, to his 60 years at Cornell. Colleagues Dale Corson, Robert Wilson, John Bachall, Sylvan Schweber, and Edwin Salpeter reflect on Bethe’s role in putting Cornell’s Physics Department on the international physics map, his Nobel Prize, his days at Los Alamos and later anti-weapons stance, his involvement in Cornell politics, and his remarkable productivity that continued well into his 80s. [11 min]

An Evening with Hans Bethe: The German Atomic Bomb Project

Bethe, Hans; Gottfried, Kurt; Powers, Thomas

<https://hdl.handle.net/1813/11504>

On November 9, 1992, Hans Bethe interpreted the transcripts made of captured German atomic scientists when they first learned that atomic bombs had been used. Thomas Powers is discussant; Kurt Gottfried is moderator. [90 min]

Hans Bethe Discusses the Manhattan Project, with Introduction by Carl Sagan

Bethe, Hans; Sagan, Carl

<https://hdl.handle.net/1813/11510>

On April 6, 1994, Hans Bethe described the Manhattan Project for Cornell students and, with Carl Sagan serving as moderator, entertained questions. Bethe headed the theoretical division at Los Alamos. [75 min]

Hans Bethe and David Mermin Discuss the Early History of Solid State Physics

Bethe, Hans; Mermin, David

<https://hdl.handle.net/1813/11509>

In 2003 Hans Bethe at age 96 (plus 238 days) discussed the early history of solid state physics with David Mermin, a colleague on the Physics Faculty of Cornell University. Bethe was an active contributor. This video had over 70,000 views by 2018. [32 min]

A Conversation with Emeriti Professors Hans Bethe and Robert Wilson

Bethe, Hans; Wilson, Robert

<https://hdl.handle.net/1813/11506>

In 1993 Hans Bethe and Robert Wilson, both of whom were participants in the Manhattan Project, continue their discussion of the atomic bomb projects. They discuss the ethical issues involved. [63 min]

Quantum Physics Made Relatively Simple

Bethe, Hans

<https://hdl.handle.net/1813/80>

In 1999, legendary theoretical physicist Hans Bethe delivered three lectures on quantum theory to his neighbors

at the Kendal of Ithaca retirement community (near Cornell University). Given by Professor Bethe at age 93, the lectures are presented here as QuickTime videos synchronized with slides of his talking points. Intended for an audience of Professor Bethe's neighbors at Kendal, the lectures hold appeal for experts and nonexperts alike. The presentation makes use of limited mathematics, while focusing on the personal and historical perspectives of one of the principal architects of quantum theory. These lectures on quantum physics attracted more than 162,000 views through 2018. An introduction and appreciation is provided by Professor Silvan S. Schweber, the noted science historian who is also Dr. Bethe's biographer; and Edwin E. Salpeter, the J. G. White Distinguished Professor of Physical Sciences Emeritus at Cornell, who was a post-doctoral student of Dr. Bethe's. [approx 180 min]

Dale Corson: Cornell's Good Fortune

Corson, Dale; Hershey, Edward (executive producer)

<https://hdl.handle.net/1813/13187>

This video chronicles the life of Cornell President Emeritus Dale Corson, from his boyhood and college years in Kansas to his distinguished career at Cornell. Commentary by various Cornell colleagues includes discussion of Corson's roles as Chair of the Physics Department, Dean of the College of Engineering, Provost, and President. The program also looks at Corson's very active post-retirement life, including his role in the creation of the Kendal at Ithaca retirement community. This was first presented at the Corson Symposium, December 6, 1999. [20 min]

The Corson Legacy: An Overview

LaFeber, Walter; Abrams, M. H.

<https://hdl.handle.net/1813/13191>

This is a companion piece to the Book: "The Legacy of Dale R. Corson." Abrams and LaFeber describe the scope and impact of Dale Corson at Cornell University. [33 min] See also <https://hdl.handle.net/1813/45762>

Campus Unrest - a lecture by Dale Corson

Corson, Dale R.

<https://hdl.handle.net/1813/13193>

[2009-07-22] This video is a companion piece to the book, "The Legacy of Dale R. Corson." This lecture was given by Corson at Kendal at Ithaca on May 31, 2007. He describes the turbulent years in the nation and specifically at Cornell University during the 1960s and 1970s; these were the years when he served as Provost and then President of Cornell University. In the midst of the Cornell crisis, Corson was asked how he was doing (personally). He responded "I'm sleeping like a baby—I wake up every thirty minutes and cry." [76 min]

A Conversation with Roald Hoffmann

Hoffmann, Roald; Widom, Ben

<http://hdl.handle.net/1813/3524>

Roald Hoffmann was born in 1937 in Zloczow, Poland. Having survived the war, he came to the U.S. in 1949, and studied chemistry at Columbia University and Harvard University (Ph.D. 1962). Since 1965 he has been at Cornell University, now as the Frank H. T. Rhodes Professor of Humane Letters. He has received many of the honors of his profession, including the 1981 Nobel Prize in Chemistry (shared with Kenichi Fukui). "Applied theoretical chemistry" is the way Roald Hoffmann likes to characterize the particular blend of computations stimulated by experiment and the construction of generalized models, of frameworks or understanding, that is his contribution to chemistry. Interviewed by Ben Widom. Recorded June 2006. [85 min]

Roald Hoffmann Symposium Concert

Meinwald, Jerrold; Greenspan, Charlotte; et al.

<https://ecommons.cornell.edu/handle/1813/37374>

As part of a symposium on July 21, 2012, honoring Roald Hoffmann on the occasion of his 75th birthday, this musical salute by the "Heisenberg Ensemble" (Graeme O. Bailey, Charlotte Greenspan, Jerrold Meinwald, and Ian Woolford) was performed in Lincoln Hall. This included the world premiere of an original composition by Julia Meinwald. [47 min]

Frank Rhodes Salutes Roald Hoffmann (on his 75th Birthday)

Rhodes, Frank H. T.

<https://hdl.handle.net/1813/37376>

President Rhodes salutes one of Cornell's most celebrated and beloved faculty members, Roald Hoffmann, on his 75th birthday. [8 min]

A World Without Disorder: Absolute Zero Temperature - A Robert C. Richardson Lecture

Richardson, Robert C.

<https://hdl.handle.net/1813/10186>

This 1978 public lecture/demonstration describes for a general audience the behavior of materials at very low temperatures. Later Richardson, along with David Lee and Douglas Osheroff, would be honored with a Nobel Prize in Physics in 1996. [48 min]

A Conversation with Robert A. Plane

Plane, Robert A.; Hughes, Robert E.

<http://hdl.handle.net/1813/30947>

Robert A. Plane, Professor Emeritus of Chemistry, discussed his multifaceted, distinguished career with colleague Robert Hughes on September 8, 2012. He described his path into chemistry, how he came to co-author with Mitchell J. Sienko multiple textbooks in chemistry (including the famous text, *Chemistry*), his view on the future role of textbooks, his research interests, and then his equally distinguished career as an administrator. As an administrator Plane became Chair of the Chemistry Department at Cornell, Provost of the University while Dale Corson was president, President of Clarkson University, Director of the NYS Agricultural Experiment Station (Geneva), and President of Wells College. In retirement he became a vintner – extending his long-term hobby and his work at the NYS Experiment Station. Interviewed by Robert E. Hughes. [79 min]

M. H. Abrams at Cornell University

[A collection]

<https://ecommons.cornell.edu/handle/1813/14289>

This portrait of the legendary Mike Abrams, 97, contains a collection of news stories and photographs over the years that describe his interests – including his devotion to both teaching and scholarship, and his role as citizen-at-large at Cornell and internationally. These articles provide a glimpse into Abrams' role in and impact on the Cornell Community and on the larger community of scholars. We present them as a tribute to Mike Abrams in celebration of his continuing role as an inspiring teacher, a highly influential scholar and literary critic, and as a person who played a major role in defining the great literature studied by students throughout the world.

The Fourth Dimension of a Poem

Abrams, Meyer H.

<https://hdl.handle.net/1813/21919>

M. H. Abrams is a leading authority on 18th- and 19th-century literature, literary criticism, and European Romanticism. Now in his 65th year as a Cornell professor, Abrams has made substantial contributions to the field of English. He was founding editor of *The Norton Anthology of English Literature* and served as its general editor for 40 years. Abrams' numerous publications include *The Mirror and the Lamp: Romantic Theory and the Critical Tradition* (1953), which is ranked twenty-fifth on the Modern Library's list of "The 100 Best Nonfiction Books Written in English during the 20th Century." [79 min]

A Conversation with Robert Morgan

Morgan, Robert R.; Adams, Barry B.

<https://hdl.handle.net/1813/40277>

Morgan's career as writer (punctuated by a memorable endorsement from Oprah) has encompassed poetry, fiction, and history, much of it based on his experiences growing up in the American South in a story-telling family. Since retirement he has written several plays drawing on the same material. A major turning point was his success-

ful attempt to compose a semi-fictional account of the death of his uncle in World War II, told in the voice of the uncle's fiancée. [Morgan is a native of North Carolina.] [47 min]

A Conversation with Jim McConkey

McConkey, James R.; Adams, Barry B.

<https://hdl.handle.net/1813/40281>

Known for his meditative nonfiction narratives, James McConkey began teaching at Cornell in 1956 as an assistant professor in the English department. He wrote fiction until the early 1960s, and retired in 1992 as Goldwin Smith Professor of English Literature Emeritus. McConkey is the author or editor of 14 books, including *Court of Memory*, *Stories from My Life with the Other Animals*, *To a Distant Island*, and *The Anatomy of Memory*. His research and teaching interests are creative writing (poetry and fiction), and modern literature and prose, modern fiction, particularly British. [37 min]

A Conversation with Roger Gilbert

Gilbert, Roger; Adams, Barry B.

<https://hdl.handle.net/1813/40848>

Professor Gilbert discusses the biography he is writing about beloved poet A. R. (Archie) Ammons; he also comments about friend and colleague M. H. Abrams. [59 min]

A Conversation with Winthrop (Pete) Wetherbee III

Wetherbee, Winthrop (Pete) III; Adams, Barry B.

<https://hdl.handle.net/1813/66718>

Winthrop ("Pete") Wetherbee recounts highlights of his career as Professor of English at Cornell, with close ties to Cornell's Medieval Studies Program and its Department of Classics. He also describes his role in developing a teaching program at the maximum security prison at Auburn, New York. [33 min]

A Conversation with Alison Lurie

Lurie, Alison; Adams, Barry B.

<https://hdl.handle.net/1813/40577>

As a member of the Cornell English Department, Professor Lurie has taught courses in literature as well as writing. These included treatment of such topics as children's literature and children in literature that had not been appropriated by colleagues with advanced degrees, which she lacked. Several of her acclaimed novels have academic settings, reflecting her declared preference for writing about what she has experienced personally, but she debunks the notion that characters in her *War Between the Tates* are based on Cornell faculty members. She speculates that if she had been ten years older than she is, she would never have been allowed to do any teaching in the Department, and if she had been ten years younger, she would have been allowed to do so much sooner. [36 min]

A Conversation with Kenneth A. McClane

McClane, Kenneth A.; Adams, Barry B.

<https://hdl.handle.net/1813/40578>

Professor Kenneth McClane reflects on his experience as a Cornell freshman, as a member of the Arts College undergraduate College Scholars Program, as a graduate student in the Cornell English Department, and as the distinguished W.E.B. Du Bois Professor of Literature at Cornell. He shares memories of growing up in a Harlem household that entertained prominent participants in the civil rights movement of the 1950s and '60s. He describes his experience as a poet and autobiographical essayist, as well as a teacher in Cornell's creative writing program (which happened to include assignment to an office in Goldwin Smith Hall once used by Vladimir Nabokov), and reflects on his role as a member of two Cornell presidential search committees conducted by the Cornell Board of Trustees. [42 min]

A Conversation with Jonathan Culler

Culler, Jonathan; Adams, Barry B.

<https://hdl.handle.net/1813/40867>

During his 38 years on the Cornell faculty, Jonathan Culler (successor to M. H. Abrams as Class of 1916 Professor of English) has served as academic administrator as well as teacher and scholar, first as Director of the Society for the Humanities and subsequently as Chair of the English Department, Chair of the Comparative Literature Department, and Associate Dean of the College of Arts and Sciences. His undergraduate teaching has included Freshman Humanities seminars, as well as large lecture courses treating literary texts as more than self-reflective explorations of the act of creating novels and poems. Much of his teaching at all levels has involved his scholarly interest in critical theory, which he has pursued since his pre-Cornell days at Cambridge and Oxford, where he also engaged in a form of academic administration quite different from what he has found at Cornell and other American universities. [43 min]

On Teaching

Marcham, Frederick G.

<https://hdl.handle.net/1813/3452>

On Teaching contains a number of essays and reflections by F. G. Marcham on the roles of teacher and student. The bulk of these articles were written in the latter part of his seven decades as a teacher at Cornell. It contains examples of teaching techniques and materials used during Professor Marcham's many years at Cornell. [101 pages]

Beliefs: Eight Essays and Nine Rules to Live By

Marcham, Frederick G.

<https://hdl.handle.net/1813/3457>

This book contains seven numbered essays that F. G. Marcham shared most often with friends and others, and an eighth, unnumbered essay on nature, delivered at Cornell's Adult University. He also prepared a list of nine rules to live by, which he shared with students who asked advice, and in a video to be available on DVD, "A Last Class". Prof. Marcham's views on his relation to others, nature, God, and aging, and rules to guide one's life are also part of this book. [71 pages]

Enrico Fermi: The Master Scientist

Orear, Jay

<https://hdl.handle.net/1813/74>

Cornell Emeritus Professor Jay Orear discusses his relationship with his former professor and mentor Enrico Fermi. The book also includes discussions about Fermi by other scientists, most of whom presented their papers at various symposia honoring Fermi's career. [171 pages]

Shakespeare Got It Wrong; It's Not "To Be," It's "To Do": The Autobiographical Memoirs of a Lucky Geophysicist

Oliver, Jack E.

<https://hdl.handle.net/1813/75>

Cornell Emeritus Professor Jack Oliver reflects, often quite humorously, on his life and career. Includes stories of his boyhood in Ohio, his college days at Columbia, and his years teaching and conducting research at Cornell. Also includes discussions of his breakthrough work in plate tectonics. [246 pages]

A Brief History of the Arecibo Observatory [Lecture at Kendal]

Campbell, Donald B.

<https://hdl.handle.net/1813/33229>

A former director of the Arecibo Observatory presented to the residents of Kendal at Ithaca an historical overview of the world's largest, single-dish radio telescope, located in Puerto Rico, that was developed and led as a national laboratory by Cornell. [51 min]

A Conversation by Three Arecibo Observatory Pioneers: William E. Gordon, Dale R. Corson, and William McGuire

Gordon, William E.; Corson, Dale R.; McGuire, William "Bill"

<https://hdl.handle.net/1813/41205>

This is a discussion of the early days of the Arecibo Observatory by three of the enablers of its creation. [54 min]

Selections Concerning the History of the Arecibo Observatory

Cooke, J. Robert (producer)

<https://hdl.handle.net/1813/42726>

This is a collection of newspaper and magazine articles about the Arecibo Observatory. [137 pages]

Nonlinear Dynamics and Chaos: Lab Demonstrations

Strogatz, Steven H.

<https://hdl.handle.net/1813/97>

This video shows six laboratory demonstrations of chaos and nonlinear phenomena, intended for use in a first course on nonlinear dynamics. Steven Strogatz explains the principles being illustrated and why they are important. The demonstrations are: (1) a tabletop waterwheel that is an exact mechanical analog of the Lorenz equations, one of the most famous chaotic systems; (2) a double pendulum, a paradigm of chaos in conservative systems; (3) airplane wing vibrations and aeroelastic instabilities, as exemplars of Hopf bifurcations; (4) self-sustained oscillations in a chemical reaction; (5) using synchronized chaos to send secret messages; and (6) composing musical variations with a chaotic mapping. Strogatz is joined by his colleagues Howard Stone, John Dugundji, Irving Epstein, Kevin Cuomo, and Diana Dabby. [47 min]

Chaos, Levitation, and Sculpture: Overlapping Circles of Creativity [Lecture in Mind and Memory course]

Moon, Francis C.

<https://hdl.handle.net/1813/30389>

This is a lecture given in spring 1996 as part of Prof. James McConkey's cross-disciplinary course on "Mind and Memory." Prof. Frank Moon presents a lecture/demonstration on his pioneering work on magnetic levitation of trains utilizing superconductors, his extensive research in chaos and nonlinear vibrations, and his passion for sculpturing using several different media. He connects these disparate interests by the connecting framework of twelve steps in the creative process. [78 min]

The Substance of Civilization: Materials and Human History from the Stone Age to the Age of Silicon

Sass, Stephen L.

<https://hdl.handle.net/1813/66918>

This talk explores the role of materials in the development of modern industrial civilizations by putting technology into an historical and human context, and by examining the advances made possible by innovations with materials. [35 min] Also available at: <https://www.cornell.edu/video/stephen-sass-the-substance-of-civilization>

A Conversation with David Feldshuh

Feldshuh, David; Levitt, Bruce A.

<https://hdl.handle.net/1813/50075>

Emeritus Professor David Feldshuh was the Artistic Director of the Department of Theatre, Film and Dance – now called Performing and Media Arts – for 27 years. [See also the following entry.] [47 min]

Antigone (script, video segments, and commentary)

Feldshuh, David; Booth, Dan; Rusten, Jeffrey

<https://hdl.handle.net/1813/30557>

In Fall 2003, Sophocles' *Antigone* was a prominent topic on the Cornell campus. Chosen for the 2003 New Student Reading Project, it was assigned reading for all incoming students over the summer. Upon their arrival on campus, it formed the basis for a shared academic experience consisting of small- and large-group discussions. *Antigone* was also the opening play in the 2003-2004 season at the Cornell Schwartz Center for the Performing Arts. David Feldshuh directed his own adaptation of the play, of which two video clips are included. In addition, the entire script can be downloaded. [3 & 5 min; 66 pages]

“One Vision, Many Voices: First Year Diversity Initiative” featuring the Cornell Interactive Theater Ensemble’s presentation of “Being Antigone”

Dewey, Martha; Relta, Vivian; Cruz, Dane; Brown, Kimberly

<https://hdl.handle.net/1813/96>

This video documents “One Vision, Many Voices,” Cornell’s annual orientation program for first-year students, which augments the Provost’s First Year Reading Project. CITE’s interactive scenario, “Being Antigone,” contemporizes themes and relationships from Sophocles’ *Antigone*, the text for the 2003 Reading Project. *The interactive theatre medium stimulates dialogue from multiple points of view about how to listen to and learn from one another when we profoundly disagree.* [78 min]

The American University: National Treasure or Endangered Species?

Ehrenberg, Ronald G. (editor)

<https://hdl.handle.net/1813/39120>

Over the past decade, America’s research universities have been accused, with increasing frequency and passion, of a wide variety of sins. Universities do not devote enough attention to undergraduate education, the charge goes, or they pursue unnecessary research, or they award doctoral degrees that focus too narrowly and take too long to complete. What have these institutions done to provoke such criticism and why has financial support from both public and private sectors eroded? In *The American University*, a volume published in honor of Frank H. T. Rhodes, President Emeritus of Cornell University, distinguished scholars and administrators address these issues and suggest ways in which research universities can respond to current and future challenges. [188 pages]

A History of Railroads in Tompkins County

Lee, Hardy Campbell; Rossiter, Winton G.; Marcham, John

<https://hdl.handle.net/1813/11518>

In American railroading, this upstate New York county was a true pioneer. A proving ground to generate commerce, the county’s early entrepreneurs explored ways to transport products and people from and to bigger markets, mines, and the Great Lakes. After considering water routes to overcome Tompkins County’s location in a deep valley, investors turned in 1833 to inclined planes and horse-drawn freight and passenger coaches on rails. Steam locomotives soon replaced horsepower. Amid wild speculation and financial crises, more than fifty different railroad corporations were formed, which evolved into seven separate routes through the county. Over time, prosperity waxed and waned for its miners, manufacturers, dairy farmers, merchants, and higher education. But after World War II the auto, truck, and airlines put most smaller American railroads out of business. This illustrated history records a century and a half of colorful railroading, at the end of which only one line remains in the county, carrying long trains of coal to a Cayuga Lake power plant and returning with rock salt from an underground mine. [102 pages]

Elmira, Cortland & Northern RR: 1867 to 1967 and On

Marcham, David; Marcham, John (editor)

<https://hdl.handle.net/1813/14138>

This book is both a railroad history and a memoir. The author vividly reconstructs the life of the Elmira, Cortland & Northern Railroad, its predecessor lines, and its successors over the one hundred years the route was in operation. Marcham does so as someone who worked for the Lehigh Valley Railroad as a towerman at Cortland Junction, and five other Lehigh Valley interlocking towers and as a rail historian who has gathered stories, photos, and artifacts from men who worked this line and fellow historians across several states. [164 pages]

The Gangly Country Cousin: The Lehigh Valley’s Auburn Division

Trice, Herbert V.

<https://hdl.handle.net/1813/11631>

This is the story of how the Lehigh Valley Railroad consolidated many hastily built shortlines in upstate New York to create its Auburn Division in the late 1800s. Basically a rural railroad launched by colorful entrepreneurs, divi-

sion stood apart from the LV's mainline segments - somewhat in the role of a gangly country cousin. Traveling no less than 415 route miles in the scenic Finger Lakes region, light engines chugged along spindly single tracks, over bridges cheaply built to span glacial creeks and valleys. Business was mostly local, except for a thread of Pennsylvania coal traffic. A healthy volume of farm products, particularly milk, made their way to urban markets. Passenger service, in great demand before the automobile appeared, was crude. Despite all this, the Auburn Division was a serviceable railroad until the late 1930s. The arc of its growth followed that of most American railroads. One prosperous stretch of the Auburn Division remains. Before the others were abandoned, they contributed richly to the history and economy of their region, recorded here in 190 illustrations and a graceful untangling of complicated tales. [162 pages]

Guide to the Plant Communities of the Central Finger Lakes Region

Mohler, Charles L.; Marks, Peter L.; Gardescu, Sana

<https://hdl.handle.net/1813/3564>

This book is for anyone with an interest in the outdoors, who would like to learn about the Finger Lakes region in general, and particularly about the kinds of plant communities found in central New York. Our main objective is to provide an introduction to the major types of plant communities in the region and where in the landscape they occur. It is intended to be read as a normal book, from beginning to end; it can also be used as a reference to be consulted about the nature of a particular community type. The book is written primarily for those without a background in botany or plant ecology, but should also be of interest to naturalists and biologists. [134 pages]

The Case for a Primary Diplomatic Relationship with China

Kirk, Mark

<https://hdl.handle.net/1813/8294>

The Honorable Mark Kirk, Cornell class of 1981, presented his thoughtful and provocative views on "The Rise of China" in a November 8, 2004, lecture. Kirk has been named by the *Congressional Quarterly* as one of the emerging leaders of Congress. [68 min]

A Conversation with Al George

George, Albert R.; Moon, Francis

<https://hdl.handle.net/1813/37324>

This video is part of the Oral History Project of the Sibley School of Mechanical and Aerospace Engineering. Albert R. George, the John F. Carr Professor of Mechanical Engineering at Cornell University, is interviewed by Prof. Emeritus Frank Moon. His concept and implementation of student-run design projects (Formula One scale model racing cars) has spread across the nation. [65 min]

A Conversation with Art Ruoff

Ruoff, Arthur L.; Hoffmann, Roald

<https://hdl.handle.net/1813/39289>

Professor Ruoff has dedicated his career to the study of the effect of very high pressure on materials. His research has been marked by many impressive achievements. In 1990 he reached a static pressure of 416 GPa, becoming the first scientist to create a static pressure greater than that at the center of the earth, 361 GPa. He has carried out optical studies on diamonds and has obtained x-ray diffraction patterns of tungsten at 560 GPa, the highest static pressure obtained to date. Professor Ruoff has published over 300 scientific publications and has been invited to give talks in 18 countries. He wrote two books on Materials Science published by Prentice Hall in 1972 and 1973, and developed an audio-tutorial course on Introductory Materials Science, which has been used in 60 universities. [71 min]

A Conversation with Edmund T. Cranch

Cranch, Edmund T.; Moon, Francis C.

<https://hdl.handle.net/1813/31544>

This former dean of engineering, Edmund T. Cranch, gave a wide-ranging, 97-minute interview that was led by

friend and colleague, Frank C. Moon. He recounts how he was drawn to a career in engineering. After employment at Bell Labs and a stint in WWII, Cranch returned to Ithaca for further study, and immediately thereafter was appointed to the faculty. He is well known for his role in writing *Engineering Mathematics* (a classic that enhanced the strength of the undergraduate engineering program). He advanced through the administrative ranks from Department Chair and then to Associate Dean of Engineering. His faculty colleagues elected him to a five-year term on the Cornell University Board of Trustees. His leadership skills were demonstrated through his chairing of two major university committees — one on long-range financial planning (aka the Cranch Report) and from 1974 to 1976, the Committee on Special Educational Projects (aka COSEP). After almost six years as Dean of Engineering at Cornell, he served as President of Worcester Polytechnic Institute. By 2018 Frank Moon's oral history interview of Edmund Cranch had drawn the attention of more than 155,000. [88 min]

A Conversation with Sidney Tarrow

Tarrow, Sidney; Roberts, Kenneth

<https://hdl.handle.net/1813/66713>

Sidney Tarrow is the Maxwell M. Upson Emeritus Professor of Government and an Adjunct Professor in the Cornell Law School. A fellow at the American Academy of Arts and Sciences, he has also taught at Yale University and been a visiting professor at the Universities of Florence, Pavia, Trento, and the Fondation Nationale des Sciences Politiques in Paris. Past President of the Comparative Politics Section of the American Political Science Association, he has also served as President of the Conference Group of Italian Politics and Society. Tarrow is the author of *Peasant Communism in Southern Italy; Between Center and Periphery: Grassroots Politics in Italy and France; Democracy and Disorder: Protest and Politics in Italy, 1965-1974; Power in Movement; Strangers at the Gates*; (and with David S. Meyer) *The Resistance: The Dawn of the Anti-Trump Opposition Movement; Contentious Politics* (with Charles Tilly); and *Dynamics of Contention* (with Doug McAdam and Tilly). [49 min]

A Conversation with Malcolm Bilson

Bilson, Malcom; Moseley, Roger

<https://hdl.handle.net/1813/66727>

Malcolm Bilson, Frederick J. Whiton Professor of Music Emeritus, discusses these topics: His early years in Los Angeles; undergraduate degree from Bard College, 1957; 3 years post-graduate study in Europe; and seven years on the faculty of the University of Illinois before coming to Cornell in 1968. Member of American Academy of Arts and Sciences, recipient of the James Smithson Bicentennial Award in 2006, Honorary Doctorate from Bard College, 1991. Bilson is best known for his groundbreaking performances and recordings on 18th- and 19th-century pianos, bringing earlier musical styles of execution back into modern performance practices. [69 min]

A Conversation with Cynthia Turner

Turner, Cynthia; Colle, Royal D.

<https://hdl.handle.net/1813/33466>

Professor Cynthia Turner shares another piece of Cornell's global dimension that takes place in a service-learning project in Costa Rica. In this July 2013 interview with Royal Colle, Professor Turner, a faculty member in the Music Department, tells how students in the Cornell Wind Ensemble, beginning during the winter session of 2006, have played a major role in organizing music-related activities with young people in Costa Rica, including donating instruments to them collected from various sources in preparation for the Costa Rica ventures. Professor Turner, who joined the Cornell faculty in 2004, is an active conductor, festival adjudicator, and clinician in the United States, Latin America, Europe, and Canada. [42 min]

A Conversation with Bob Frank

Frank, Robert H.; Gilovich, Thomas D.

<https://hdl.handle.net/1813/50977>

For more than a decade, Bob Frank's "Economic View" column has appeared monthly in *The New York Times*. His books, which include *Choosing the Right Pond, Passions Within Reason, Microeconomics and Behavior, Principles of Economics* (with Ben Bernanke), *Luxury Fever, What Price the Moral High Ground?, Falling Behind, The Economic*

Naturalist, *The Darwin Economy*, and *Success and Luck*, have been translated into 23 languages. *The Winner-Take-All Society*, co-authored with Philip Cook, received a Critic's Choice Award, was named a Notable Book of the Year by *The New York Times*, and was included in *Business Week's* list of the ten best books of 1995. He is a co-recipient of the 2004 Leontief Prize for Advancing the Frontiers of Economic Thought. He was also awarded the Johnson School's Stephen Russell Distinguished Teaching Award in 2004, 2010, and 2012, and its Apple Distinguished Teaching Award in 2005. [40 min]

A Conversation with David J. BenDaniel

BenDaniel, David J.; Cooke, J. Robert (interviewer)

<https://hdl.handle.net/1813/33370>

At Cornell, David BenDaniel serves as a senior fellow of the Entrepreneurship and Personal Enterprise Program. In addition to his teaching and research, he has been active in investing venture capital. This video is about BenDaniel and his leadership role in developing the entrepreneurship thrust at Cornell University. [33 min]

A Conversation with Mary Beth Norton

Norton, Mary Beth; Hull, Isabel "Itsie" V.

<https://hdl.handle.net/1813/66717>

Mary Beth Norton is a pioneer who helped open up the historical profession to women and founded the field of women's and gender history. Topics include Norton's childhood in Indiana, her education at the University of Michigan and Harvard, her political activism beginning in the 1960s, her historical research in Early American and women's history, and her role at Cornell in campus politics and in the classroom. [66 min]

A Conversation with Glenn Altschuler

Altschuler, Glenn; Kramnick, Isaac

<https://hdl.handle.net/1813/66634>

Glenn Altschuler, the Thomas and Dorothy Litwin Professor of American Studies and Dean of the School of Continuing Education and Summer Sessions, discusses his formative years in Brooklyn as well as his teaching, scholarship, relationships with alumni, and administrative roles at Cornell. Altschuler and Kramnick are coauthors of *Cornell: A History, 1940–2015*.

A Conversation with LeLand "Skip" Carmichael

Carmichael, LeLand "Skip"; Tennant, Bud C.

<https://hdl.handle.net/1813/41371>

Skip Carmichael's distinguished career working with infectious diseases and virology produced many far-reaching contributions, especially the creating of a vaccine for canine parvovirus. [63 min]

A Conversation with Bud C. Tennant

Tennant, Bud C.; Carmichael, LeLand "Skip"

<https://hdl.handle.net/1813/41373>

Bud Tennant's multidimensional career as a veterinarian is discussed with Skip Carmichael. [53 min]

A Conversation with Juris Hartmanis

Hartmanis, Juris; Gries, David

<https://hdl.handle.net/1813/14934>

Juris Hartmanis is video taped in a far-reaching conversation with colleague David Gries. They discuss Hartmanis' childhood and family background, and his immigration to the United States. Next they trace his extraordinary career at the GE Research Laboratory, where he collaborated with Richard Stearns on pioneering research that was eventually recognized by the Association for Computing Machinery's (ACM) prestigious and highest honor – the Turing Award. Having served earlier as an Instructor in Cornell's Mathematics Department, Juris returned to Cornell as a full professor and the founding chair of a new department of Computer Science. This Department was embedded in two colleges, Engineering and Arts and Sciences. Cornell was among the first universities to establish a Department of Computer Science. His pioneering work on computational complexity blossomed into a

new field, and under his leadership the Computer Science department matured into a robust, national leader with a strong theoretical emphasis. After a successful stint at the National Science Foundation, leading the transition of the academic research network NSFnet to become the Internet, he returned to Cornell where he continues an active program of research and maintains a leadership role in developing information technologies that have become a ubiquitous element across the entire Cornell academic scene. [70 min]

A Conversation with John E. Hopcroft

Hopcroft, John E.; Gries, David

<https://hdl.handle.net/1813/40568>

John E. Hopcroft – a winner of the 1986 Association for Computing Machinery’s (ACM) Turing Award – has contributed massively to research, education, and service like no other. His research in theory and algorithms won him the Turing Award in 1986. His early texts set the direction and tone for the new field of Computer Science. His service as Dean of Engineering, member of the National Science Board, and advisor on education and research to universities and governments around the world is astounding. With too many awards and society memberships to mention (including at least 5 honorary degrees), in 2016, 52 years after entering the field, John is still going strong. Here, John talks about research, textbooks, working with graduate students, and his role as a senior statesman, concluding with some words of wisdom. [37 min]

The Early Years of Academic Computing: A Collection of Memoirs

Arms, William Y.; King, Kenneth M.

<https://hdl.handle.net/1813/36810>

This is a collection of memoirs by people involved in the early days of academic computing, when universities created their own computing environments. During this period universities played a major role in advancing technology in the areas of operating systems, networking, computer languages, and the computer-human interface, as well as developing the new discipline of Computer Science. The technological advances to which universities contributed included time-sharing, distributed computing, personal computing, and the Internet. These memoirs provide personal insight into the state of computing and the process of its development in the early years of its evolution, when universities were the laboratories in which important technological advances occurred. [155 pages]

Highlights in Dairy Cattle Reproduction in the Last 100 Years

Foote, Robert H.

<https://hdl.handle.net/1813/3665>

The booklet, “Highlights in Dairy Cattle Reproduction in the Last 100 Years,” is written in two parts: Part I is a general overview of the important discoveries in reproduction and reproductive biotechnologies applied to dairy cattle, written for a general audience. Part II is a technical review of the topic documented with multiple references. Emphasis is placed on the most important biotechnology – artificial insemination – with associated research on both males and females. [87 pages]

A Conversation with André Jagendorf

Jagendorf, André; Turgeon, Robert

<https://hdl.handle.net/1813/44720>

André Tridon Jagendorf is a Liberty Hyde Bailey Professor Emeritus in the Section of Plant Biology at Cornell University. He is notable for providing direct evidence that chloroplasts synthesize adenosine triphosphate (ATP) using the chemiosmotic mechanism proposed by Peter Mitchell. Jagendorf became the President of the American Society of Plant Physiologists in 1967. He received the Charles F. Kettering Award of the American Society of Plant Physiologists in 1978. In 1980 Jagendorf was elected to the National Academy of Sciences; received the Charles Reid Barnes Life Membership Award of the American Society of Plant Physiologists in 1989; and in 2012 received the Rebeiz Foundation for Basic Research Life Time Achievement Award for his contributions to the understanding of ATP Biosynthesis. [46 min]

A Conversation with Richard P. Korf

Korf, Richard P.; Zaitlin, Milton (interviewer)

<https://hdl.handle.net/1813/28593>

Korf, long-time member of the Plant Pathology faculty in the College of Agriculture & Life Sciences, described his department's early history and the early days of the evolution of mycology and plant pathology. This interview is an elaboration of an article about the history of mycology that he published in 1991. His own productive career included producing a scholarly journal, *Mycotaxon*, and even in retirement still served as an editor. Among the innovations Korf instituted were the use of camera-ready submissions to speed publication and a unique non-blind refereeing system. His lifelong interest in the theater and acting led to his serving as Chair of the Theatre Arts Department at Cornell. [35 min]