

## A New Era for Arts and Sciences

### MESSAGE FROM THE DEAN



Bruce Ronkin, Interim Dean

*“First, that the educated man should recognize in a broad way the main currents of human activity and, so far as possible, the physical qualities of his environment; and, second, that his studies, without sacrificing their liberal value, should prepare him definitely for a useful career.”*

THESE WERE THE founding principles declared at the creation of Northeastern’s new College of Liberal Arts in 1935. While arts and sciences have always played an integral role at Northeastern – courses in architecture, drawing, French, literature, and mathematics were among the first taught to turn-of-the-century students in the YMCA – a single college dedicated to those disciplines wasn’t formed until the University’s thirty-seventh year.

The decision to create this college had an extraordinary impact on intellectual life at Northeastern; it provided students with a new way to view the world, solidified our institutional identity, and illuminated our path toward becoming a world-class university.

Over the past seventy-five years, the College has continued to expand its academic reach, enabling Northeastern to mature as an institution of higher learning. Departments have been added and reorganized; graduate programs have been created and refined. We became the College of Arts & Sciences in 1979, and showed the world how experiential learning and the liberal arts can work together to change lives.

In this way – through its presence at the University from its founding, and through numerous expansions, renamings, and restructurings – the study of arts and sciences at Northeastern has been characterized by both continuity and change. Always a critical part of our identity, it has constantly adapted to meet the needs of new generations.

This July, the arts and sciences will launch a new era at Northeastern with the creation of

three innovative colleges: the College of Arts, Media and Design; the College of Science; and the College of Social Sciences and Humanities.

Through these new colleges, we will continue to embrace the founding principles of the College of Liberal Arts; indeed, we endeavor to

*continued on back cover*

#### INSIDE THIS ISSUE

- 1 *A New Era for Arts and Sciences*
- 2 *College of Arts, Media and Design*
- 3 *College of Social Sciences and Humanities*
- 4 *College of Science*
- 5 *The Path to Discovery*
- 6 *A Winning Hand Center Stage*
- 7 *Stop the Presses*



YMCA Building on the corner of Huntington Avenue and Gainsborough Street, circa 1910

# The College of Arts, Media and Design



**I**N TODAY'S CREATIVE economy, the disciplines within the College of Arts, Media and Design are drivers of growth and innovation. Architecture, art, and design weave the fabric of cities and cultures. Journalism and other forms of mass communication disseminate new information to an increasingly global audience. Digital media increase human capabilities to explore and link new knowledge.

In short, creative fields and evolving technology make it possible to connect people and ideas as never before, serving as strong catalysts for change and expanding the understanding of our shared humanity.



## The Coolest Co-op

**T**AKUO URUSHIHARA hit a home run with his co-op for the Boston Red Sox, scoring top prize in Northeastern's "Coolest Co-op" video competition.

As part of the Co-op Centennial celebration, undergraduates made short videos showcasing why their job was cooler than any other in Northeastern co-op history.

Urushihara, a communication studies and theatre double major, called his co-op with the Red Sox "unbelievable" and "something I could not experience anywhere else."

He started working in the media control room at historic Fenway Park in 2007 and the organization named him "Employee of the Season" after the 2008 campaign.

He has continued to work at baseball's oldest park through a program offered by Northeastern's International Student & Scholar Institute. He controls all of the content – from player stats to bloopers – that appears on the center field video board on game day.

*Watch his video at [www.northeastern.edu/camd/about/news.html](http://www.northeastern.edu/camd/about/news.html)*

## Smart Art

**I**MAGINE WALKING into a retail store and encountering a digital screen that flashes advertising tailored specifically to you. This clever marketing strategy is the result of facial recognition technology being developed by W. Russell Pensyl, chair of the Department of Art + Design.

Pensyl describes the technology as "an unobtrusive, ubiquitous content delivery system" in which a camera scans a person's face and determines the person's gender and approximate age. A screen in front of the shopper then loads and displays corresponding advertisements based on that profile.

The system can also detect whether the person is wearing glasses and if the person is smiling. Pensyl hopes to develop the software to analyze other attributes, such as fashion sense and hairstyle.

Pensyl stressed that no information is stored and collected. "Once they exit the frame, it's gone. There's no goal to do any data capturing," he said.

*Pensyl hopes to develop the software to analyze other attributes, such as fashion sense and hairstyle.*

Pensyl also plans to have his students work on interactive paintings that incorporate the technology. For instance, Pensyl said, in a digital painting of flowers, the flowers' age could mirror the age of the person viewing them. Or if the person viewing the painting is smiling, the flowers could blossom or the colors could become more vibrant.

"If this thing has commercial success, that's great. But as an artist and designer, I'm also interested in how to build cultural artifacts on top of the systems," he said.

School of Architecture

Department of  
Art + Design

Cinema Studies  
Program

Department of  
Communication Studies

Creative Industries  
Program (Interactive  
Media, Game Design)

School of Journalism

Department of Music

Department of Theatre

[www.northeastern.edu/camd](http://www.northeastern.edu/camd)

# The College of Social Sciences and Humanities



**S**TUDENTS IN THE College of Social Sciences and Humanities explore intrinsic questions about human nature and behavior, the organization and functioning of societies and cultures, and how humans seek to shape the world they share. These common threads open the world to students, providing them with a broad understanding of the relationships among peoples and nations; global economics and politics; the diversity of languages, literatures, religions, and cultures; and multiple perspectives in urban affairs, public policy, law, criminal justice, and the ethical dimensions of human behavior.

Combining academic breadth, real-world experience, interdisciplinary learning, and the expertise of faculty engaged in groundbreaking research, we provide students with the tools they need to achieve their academic and professional goals.

## Criminal Minds

**A**N EXPERT ON MURDER, violence, and hate crimes, Jack Levin is the Irving and Betty Brudnick Professor of Sociology & Criminology and co-director of the Brudnick Center on Violence and Conflict. Here, he discusses his latest research.

Department of African American Studies  
American Sign Language Program  
School of Criminology & Criminal Justice  
Department of Economics  
Department of English  
Department of History  
Human Services Program  
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Jewish Studies Program  
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School of Public Policy & Urban Affairs  
Department of Sociology and Anthropology

### Why is there such widespread fascination with serial murder?

This curiosity isn't necessarily morbid. Serial killing is so extraordinary, so grotesque that it might as well be fiction, allowing people to escape from the problems of everyday life into a true crime book or a documentary. There are also those who believe that they must know as much as possible about the phenomenon in order to avoid becoming a victim.

One popular misconception about serial killers is that they are all geniuses. Indeed, they are the cream of the crop when it comes to staying on the loose and avoiding apprehension, but few have genius IQs. In fact, some are at the low end of the scale and many are in between.

### Do undergraduates ever collaborate with you?

Every six months, I supervise a co-op student. A number of them have authored or coauthored articles published in academic journals, or have presented their research at professional conferences.

## Eyes on the Amazon

**O**N A CO-OP with international human rights organization Amazon Watch – after driving nine hours into the Ecuadorian Amazon – international affairs major Michaela D'Amico found herself peering into the murky depths of an oil slick.

Leading a group of concerned citizens and attorneys to an environmental clean-up site, she felt a rising passion.

"I felt such a strong sense that we were helping... indigenous people who could not otherwise stand up for themselves," she said.

*continued on back cover*

### How might your research positively impact society?

Murder – especially multiple murder – is considered one of the most serious forms of criminal violence. Hopefully, my research will help determine programs and policies for reducing the prevalence of this horrendous offense.

The harm to victims of hate crimes is considerable, but the targets go beyond the primary victims. Everyone in the victim's group feels vulnerable. In our increasingly diverse society, it is important to discover ways for bringing individuals of varied backgrounds together in a spirit of cooperation and friendship.

*Levin received the 2009–10 Public Understanding of Sociology Award from the American Sociological Association.*

*Learn more at [www.violence.neu.edu](http://www.violence.neu.edu)*



*Jack Levin*



# The College of Science



THE COLLEGE OF SCIENCE offers distinguished programs in fields that are at the forefront of discovery, invention, and innovation. These programs in the physical sciences, life sciences, and mathematics give students a deep understanding of emerging fields such as chemical biology, cognition and neuroscience, environmental and marine science, biochemistry, nanoscience, and network science.

Our college promotes interdisciplinary research and thinking among faculty and students, fostering the pursuit of innovation-driven discoveries that make an impact on lives. Because programs at Northeastern often cut across broad areas of study – the arts, humanities, engineering, social sciences, and computer science – these connections extend beyond the confines of mathematics and science. By combining outstanding academics and real-world experience, the College of Science provides students with the best foundation to achieve their goals, in graduate school and in the professional world.

## Nothin' But Net(work)

IN TODAY'S WORLD, everything is connected. No one knows this better than Emily Batt.

The physics major (pictured above) has immersed herself in network science, an emerging field in which Northeastern is considered a global leader. The field explores how everything – from the Internet to diseases to human mobility – is connected.

Currently she is doing part-time student research for the University's ADVANCE program, a project funded by the National Science Foundation, that is looking at how faculty can use their professional networks to strengthen career opportunities. The work builds upon her past co-op experience aboard an NSF-funded marine-research vessel.

Batt finds the work particularly rewarding because women in STEM (Science, Technology, Engineering, and Math) fields are not published nor granted tenure as often as their male counterparts. "It's important to me because as a woman in science, I would like to know what other women are facing, so hopefully we can overcome these obstacles," she said.

Her next co-op will be at Boston's Dana-Farber Cancer Institute. "One of the emerging fields in cancer research is cellular networks and systems," she said, "so by having some of that knowledge already, I may be able to apply physics and network science to oncology."

## Robotic Bee-Havior

DRAWING INSPIRATION from the biology of a bee, Professor Joseph Ayers is working with a team of researchers to develop micro flying robots, which will emulate the insect's brain, body, and collective behavior.

With potential applications in military surveillance, search and rescue, and the exploration of dangerous environments, the project calls for the construction of an electronic nervous system to guide and power the miniature robots.

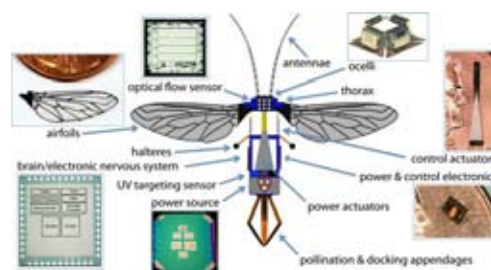
Ayers, a neuroscientist, is widely known for his work in biomimetics – or adapting control systems found in nature to inform design of engineered, problem-solving systems.

"Animals have evolved to occupy every environmental niche where we would hope to operate robots, save outer space," said Ayers. "They provide proven solutions to problems that confound even the most sophisticated robots. Our challenge is to capture these performance advantages in engineered devices."

On this project, funded by the NSF, Ayers will work with Harvard University, the Wyss Institute for Biologically Inspired Engineering, and CentEye, Inc.



Professor Joseph Ayers



The Robobee

Behavioral Neuroscience Program

Biochemistry Program

Department of Biology

Department of Chemistry and Chemical Biology

Department of Earth and Environmental Science

Environmental Studies Program

Linguistics Program

Department of Mathematics

Department of Physics

Department of Psychology

# The Path to Discovery

AS AN UNDERGRADUATE at Northeastern, Dr. Andrew Schafer, LA'69 would often see the sun rise from a lab on campus.

"I would do my experiments at night, not infrequently working in the lab until dawn, struggling mightily and often unsuccessfully to just learn basic techniques," he said. "After washing and autoclaving my own glassware, I would try to carry out the actual experiments by myself."

Now Chairman of the Department of Medicine at Weill Cornell Medical College of Cornell University, and Physician-in-Chief at New York-Presbyterian Hospital, Schafer was first drawn to medical research during his time as a young student in Northeastern's Department of Biology.

"Northeastern was filled with brilliant professors who were completely dedicated to teaching and mentoring," he said. In his sophomore year, he found his own mentor, the late Professor Charles Gainor, a prominent microbiologist.

"I had never even stepped foot in a research lab before that time," he explained, "but Dr. Gainor took me under his wing. We devised a project to isolate virulence genes from the microorganism, *Agrobacterium tumefaciens* – the bug that causes crown gall tumors in plants."

Schafer and Dr. Gainor found time each day to have intensive tutorials in the theory of microbial genetics. "He was tough, critical and very kind," said Schafer. "I had become infected for life with a passion for medical research and experimentation."

Schafer's Northeastern connection had started years before he became a student. "My father, Stephen Schafer, JD, was a Professor of Sociology and Criminology at Northeastern, who was famous for founding the field of 'victimology' – the study of victims of crime," said Schafer. "He had been a prominent lawyer in Hungary, from where we escaped in 1957 after the Hungarian Revolution, but then had to reinvent himself as a sociologist at the age of 50."

Throughout his time at Northeastern, Schafer lived at home with his parents and commuted to Northeastern with his father every day. "From my father I gained a love of scholarship, and some of his work ethic," said Schafer.

After graduating from Northeastern in 1969, Dr. Schafer went on to the University of Pennsylvania, the University of Chicago, Brigham & Women's Hospital, and Harvard Medical School in pursuit of medical research and education.

Following this path, Schafer has made exceptional contributions to the field of medical research. With broad-ranging expertise in such areas as thrombosis, coagulation, and bleeding



Bruce Ronkin, Interim Dean, and Dr. Andrew Schafer

disorders, he has penned more than 210 original articles, and acted as editor for six books. He has been continuously funded as principal investigator by the National Institutes of Health for nearly thirty years.

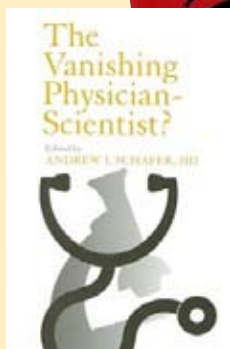
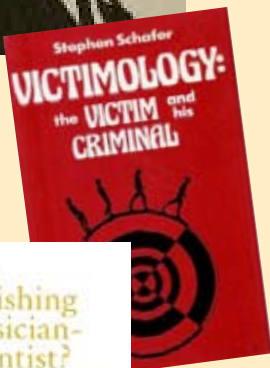
"Northeastern was the incubator for my pursuit of medical science," said Schafer. "It is where I learned to appreciate the critical importance of dedicated teaching and mentoring. None of my classmates came from privileged backgrounds, many of them were first-generation college students. They lacked absolutely nothing in ambition, drive, diligence, focus, and resilience in the face of adversity. I learned a lot from my wonderful professors, but probably even more from my fellow students."

In contrast to his long, solitary hours conducting research as an undergraduate at Northeastern, Schafer believes that the future of medicine will require collaboration – rather than individual efforts.

"The future of medical discovery is trans-disciplinary 'team research,'" he explained. "This kind of collaborative approach will largely supersede – but not fully replace – medical research traditionally conducted by individuals in segregated departmental silos."

Looking back, he is grateful for the role that his early mentor played in the discovery of his life's direction. "Whatever I have contributed to medical science, and whatever I have learned to become a mentor and teacher, I owe entirely to Professor Gainor and Northeastern!"

Professor Charles Gainor



Books published by Dr. Andrew Schafer and his father, Stephen Schafer, JD



## A Winning Hand

**I**N THE EARLY 1950s, a group of Northeastern students sat down for a simple game of poker.

None of them could have anticipated that – more than fifty years later – they would still be playing together.

The Kappa Zeta Phi fraternity brothers – like most students at the time – were commuters, so they gathered at their respective homes outside the city. It was a tradition that strengthened their friendship at Northeastern, and beyond. Although they all went their separate ways after graduation, a 1966 fraternity reunion prompted them to pick-up their cards once again.

When asked whether, after all these years of playing together, he had kept score, Ed Altshuler, '53, laughed and said "Let's just say that I am 'in the black.'"

**FOUNDING MEMBERS OF THE GROUP:** Ed Altshuler, '53; Jordan Baker, '56; the late Fred Boone, '56; Len Koiles, '56; Joe Valof, '55; Marty Weiss, '57; and Don White. Frank Davis, '60; Mel Langbort, '55; and the late Bob Spector joined later.

Front row, left to right:  
Marty Weiss, Joe Valof  
Rear row, left to right:  
Jordan Baker, Frank Davis,  
Don White, Ed Altshuler



## Center Stage

**A**CTRESS ARLENE STERNE has always had a deep passion for theatre, but she believes it takes much more than that to succeed on the stage.

"To be a good actress, you must be grounded in many fields," remarked Ms. Sterne. "I wanted to go to Northeastern because it offered me the opportunity to study a broad range of subjects. However, it was not until later in life that I realized the importance of those History and English Literature courses."

As a student, Ms. Sterne took advantage of every opportunity that campus life had to offer, serving as president of the Student Council and participating in the Model UN. Of course, she followed her true passion – acting – by performing with the Silver Masque student group and joining a local radio program that broadcasted Shakespeare's plays.

Upon graduation, Ms. Sterne was one of only three women among 32 college students awarded a prestigious internship with the U.S. Department of State. She was assigned to work on public affairs, where she met actors, writers and congressmen. "It was truly an amazing experience," noted Ms. Sterne.

Since then, she has performed in theater, film and television, and toured throughout

the United States, United Kingdom, Canada and Europe. In 1980, Ms. Sterne created her award-winning, one woman play FINAL CURTAIN, which portrays stage legends Sarah Bernhardt, Eleanora Duse and Ellen Terry.

This past August, Ms. Sterne played the role of Lucy in "Franklin (The Other Woman)" during a festival of the arts in New York. Perhaps her most important work, on a personal level, is her current role serving as executive producer for her daughter, Anna Bergman, an international concert and cabaret artist.

A true Renaissance woman, Arlene Sterne looks forward to returning to campus later this year to share her stories and experiences with our current students through the *Career Conversations* program.



Ms. Arlene Sterne with Prof. Janet Bobcean, Chair of the Department of Theatre

**Northeastern University** has provided an indelible mark on all of our lives.

Whether it was the co-op that helped you land that dream job, the thought-provoking classroom discussions that enriched your mind, or a student experience that helped open your eyes to the world beyond your doorstep, Northeastern has played an important role in molding who we are and what we've become.

**Help Northeastern shape the next generation of Huskies with a gift by June 30.**



# Stop the Presses

THIS YEAR, Northeastern created an advertisement promoting the global presence of its experiential learning programs.

“Antarctica,” it declared, “The only continent where you won’t find a Northeastern student... yet.”

But before the ad could ever appear, the slogan was rendered inaccurate by biochemistry student Corey Allard’s plans to go to Antarctica for a six-month research trip.

Under the guidance of Professor William Detrich, Allard is investigating the impact of warming seas in the South Polar Ocean on embryonic development in Antarctic fish. Specifically, they monitor the impact of the ocean’s rising temperature on the development of fish embryos, studying when and where embryos express critical genes. Over the last 50 years, the sea temperature west of the Antarctic Peninsula has increased 1.8 degrees Fahrenheit.

On this international co-op, Allard will contribute to the scientific community’s understanding of climate change and prepare him to pursue a PhD. “The idea that my work might have even a small impact on a highly relevant topic keeps me very motivated,” he said.

fish populations, in turn affecting the predators – including penguins – that rely on the fish for food.

The clever ad, which was slated for placement in *Newsweek* magazine and the *Chronicle of Higher Education*, had to be shelved, but the marketing department at Northeastern wasn’t unhappy about it.

“An enterprising student and enterprising professor managed to foil our advertising strategy,” said Michael Armini, Senior Vice President for External Affairs, to the *Boston Globe*. “It’s good to know we’ve got the whole world covered now.”



Professor H. William Detrich at the South Pole

“It’s good to know we’ve got the whole world covered now.”


Appropriately, Detrich and Allard’s research could have an impact on the subject of the ad itself, which shows a penguin standing on the ice. From an ecological point of view, said Detrich, fish embryo deaths or developmental abnormalities caused by warmer ocean temperatures could drastically alter the size of those

A large graphic for an advertisement. It features a penguin standing on the left, looking towards a red flag on a pole on the right. The background is a snowy, icy landscape. The text is overlaid on the image.

**Antarctica**  
The only continent where you won’t find a Northeastern University student ... yet.

Each year, more than 6,000 Northeastern students connect with the world through professional work experience, research, and community service in any of more than 500 cities and towns around the globe. Experiential learning integrated with classroom study gives our students the power to shape the world and transform their lives. It’s an education like no other.

[northeastern.edu/experiential-learning](http://northeastern.edu/experiential-learning)



**Northeastern University**



# Northeastern University

## College of Arts and Sciences

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### *A New Era for Arts and Sciences*

*continued from page 1*

surpass them. In the characteristic Northeastern fashion, our students will do more than appreciate and understand the world. They will change it.

I hope you'll take a moment to get to know these new colleges and to become acquainted with the remarkable research, teaching, and life-changing experiences that take place here every day. While the names are new, the colleges remain faithful to the enduring tenets of a Northeastern education: an entrepreneurial spirit, a commitment to innovation, and an unwavering emphasis on the power of experience.

These are the same principles that have always shaped the character of our University and its students; they have made us unique, and enabled us to flourish on a global scale.

The passage of time has endowed us with a strong understanding of the impact the College of Arts & Sciences has had on our University. We can only begin to imagine the

exciting, transformational journey that lies ahead as we build our three new colleges, in a new era at Northeastern.

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### *Eyes on the Amazon*

*continued from page 3*

Her primary duties included translating for the communications team, putting her minor in Spanish to good use. They issued 1,000 press releases, in English and Spanish. She also did publicity planning for the documentary film *Crude*.

In the rain forest, she led "Toxic Tours" to polluted areas, and filmed what she found. The big payoff came when Amazon Watch successfully used a video she helped produce to draw inspectors and media to oil spills.

"The work has made me want to do more on human rights and environmental causes," she said. "Grassroots is where it all begins, and it makes me feel I'm working on a bigger, more important cause."

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