



**CAPITAL PLACE:** The Kennedy Center is the performing arts capital of the nation's capital, says Christine Branche '83, but the third-generation Washingtonian says the District has long been home to a thriving arts and cultural community.



**MONUMENTAL CITY:** Often seen through the prism of politics and iconic monuments, Washington, D.C., is that and more, say alumni who have made it their home. It's a vibrant city that comes alive when you know where to look.

## Show Us Your Town

# Washington, D.C.

More than just the seat of government, the nation's capital is a city rich in art and culture, foodie havens, and outdoor getaways. Just ask some of the 4,600 alumni who make it their home.

*By Matthew Dewald*

In the hills that rise in the Northwest section of Washington, D.C., you can ride an elevator to the towers of the National Cathedral, the world's sixth largest Gothic cathedral.

Walking from window to window, **Adam Konowe '90** admires the miles-long views that extend to Virginia and Maryland and the planes coming in and out of Reagan National Airport.

"I'd rather have this view than the one from the Washington Monument," says Konowe, who has lived in Washington since he graduated from Rochester in 1990. "This is the highest point in the District. You get a view of more than just the Mall. It puts the city and its neighborhoods in perspective."

Konowe, a marketing communications executive, has combined a transplant's curiosity with three decades of living experience to put the city into perspective.


One of about 4,600 Rochester alumni who call the metropolitan D.C. area home, Konowe is also a cochair of the Washington, D.C., Network

Leadership Cabinet, an organization designed to better focus activities, programs, and opportunities for alumni and others in Washington.

It's one of 10 regional networks initially identified as part of a strategic effort to build a stronger sense of connection among Rochester's key constituent groups.

During a weekend visit last fall, Konowe and other members of the Rochester community were more than happy to act as inside tour guides, sharing their appreciation for a place that's normally portrayed only through the prism of politics and national monuments.

They all agree that there is much more to their city.

As third-generation Washingtonian **Christine Branche '83** puts it: "All Americans should come to their capital and enjoy it." 

---

*Matthew Dewald is a freelance writer based in Richmond, Virginia.*



**TREASURES:** Works by Renoir are among the Phillips Collection's treasures.

## Visual Arts

Although the Smithsonian is a must, alumni guides say some of Washington's best art museums are in private hands and are well worth seeking out.

### A Phillips Collection

1600 21st Street NW

Tucked away in a renovated mansion on a side street in the Dupont Circle neighborhood is America's first museum of modern art, the Phillips Collection. "For me this is just a neighborhood treasure," says **Debbie Dorfman Drumheller** '74, who lives nearby. Drumheller's insider tip: score a ticket for "Phillips After 5," which happens the first Thursday of every month. Admission prices are the same as always, but the museum offers hors d'oeuvres, a cash bar, and live music from chamber music to jazz.

### B Kreeger Museum

2401 Foxhall Road NW

Far from the crowds of the Mall and not easily accessible by public transit, the Kreeger Museum, located in the Foxhall neighborhood, comes recommended by **Nancie Kennedy** '79E (MM). Five acres of woods and sculpture gardens surround the museum, which focuses on 19th- and 20th-century European painting. The Kreeger home is itself a work of art, having landed in the pages of *Vogue* when the building was under construction in 1964.

### C Hillwood Estate, Museum, and Gardens

4155 Linnean Avenue NW

**Dusty Riddle** '09S (MBA) and Kennedy both recommend a visit to the former home of Marjorie Merriweather Post, heir to the Post cereal fortune and a lifelong art collector. She amassed a stunning collection of Imperial Russian treasures while her third husband served as U.S. ambassador to the early Soviet Union. Hillwood's famed House of Fabergé eggs, picture frames, jewelry, and other decorative items used by the Russian royals are a true must-see.

## Performing Arts

"You get your credentials at the Kennedy Center," says Kennedy of the capital's most famous performing arts venue. But she adds that the District's offerings extend well beyond it.

### D Arena Stage

1101 Sixth Street SW

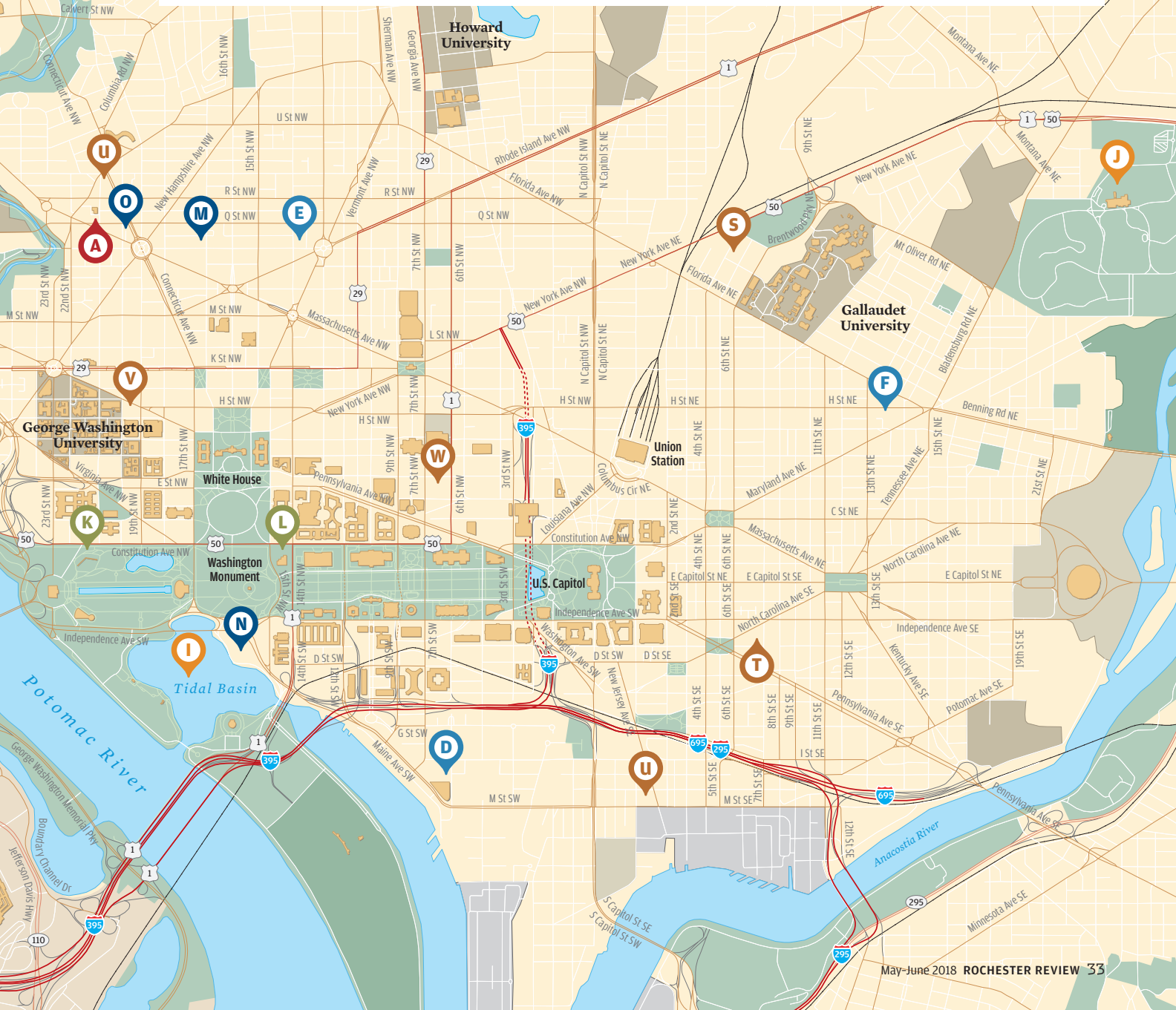
Kennedy enjoys the solidly American themes of Arena Stage—devoted exclusively to American theater—which sits right on the Potomac in the city's Southwest quadrant.



## When You Go ... An Insider's Guide

Members of the Washington, D.C., Regional Network shared their expertise as residents of the nation's capital to put together a short list of favorites—sites that are off the standard itinerary as well as quintessential D.C. traditions. The color-coded circles match the descriptions for each spot.

The D.C. edition of *Show Us Your Town* is part of a series highlighting the University's regional networks.





## Meet Your Guides

Members of the Washington, D.C., Network Leadership Cabinet served as guides to the nation's capital.

Cochaired by Christine Branche '83, Debbie Dorfman Drumheller '74, and Adam Konowe '90, the group organizes activities, programs, and opportunities for alumni and other members of the University community in the region to volunteer, network, and stay connected.

### Christine Branche '83

*Bowie, Maryland*

A third-generation Washingtonian, Branche is an epidemiologist at the Centers for Disease Control.

### Debbie Dorfman Drumheller '74

*Washington, D.C.*

Drumheller retired from a career as a financial executive and treasurer for a major oil company.

### Adam Konowe '90

*Reston, Virginia*

Konowe began his career as a television producer before moving to public relations.

### Dusty Riddle '09S (MBA)

*Washington, D.C.*

Riddle works in credit card finance for a national company.

### Nancie Kennedy '79E (MM)

*Annapolis, Maryland*

A retired opera singer, Kennedy frequently visits the District for performances.

### Mia Alqadi Comrie '08

*Silver Spring, Maryland*

Comrie is a senior program specialist for the Department of Justice, working on police-community relations.

### E Studio Theater

*1501 14th Street NW*

Located just off Logan Circle, Studio Theater produces contemporary works that hit head and heart, says Riddle, who described a recent show there about a father's descent into dementia as something that "made you think. It was very raw and emotional." Its shows are intimate, with none of its four theaters seating more than 225.

### F UrbanArias

UrbanArias is a contemporary company giving opera a makeover. "If I were taking somebody into Washington and they've done the tourist things, the traditional things—this would take you in different directions," says Kennedy. The company produces short contemporary operas with titles like *Craigslist Cabaret* and *Photo-Op* at the Atlas Performing Arts Center on H Street in Northeast Washington and at Signature Theater in Arlington, Virginia.



**HIDDEN HIGHLIGHT:** The C&O Canal trail is an accessible, outdoor asset.

## ☀️ Outdoors in the District

Rochester alumni are in consensus: D.C. is a town that rewards ambling outdoors, and it has abundant options.

### G C&O Canal Trail

A walking and biking path built on a converted railroad bed, the C&O Canal Trail is a mainstay of Drumheller's outdoor routine. "It's a D.C. asset that not a lot of people know about," she said during a walk along it, the Potomac River just beyond the tree line. She often spots geese, turtles, and other wildlife on her regular bike rides. "If you live in Washington and haven't been here, it's a shame. It's so accessible. Here we are just a few miles from the Capitol, and it's beautiful."

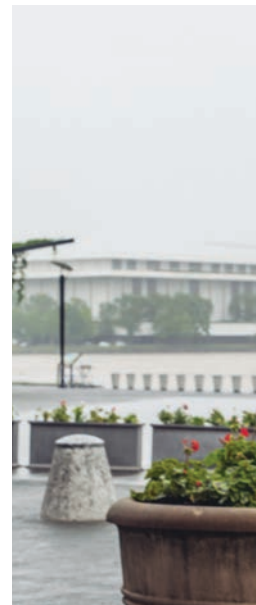
### H Georgetown Waterfront Park

Overlooking the Kennedy Center and Roosevelt Island, the Georgetown Waterfront Park is the place to kayak or paddleboat, says Drumheller. The Georgetown University crew team practices there, too.

### I Tidal Basin

Branche treasures walks along the Tidal Basin, which is ringed by memorials for Thomas Jefferson, Franklin Delano Roosevelt, and Martin Luther King Jr. "MLK is looking right at Jefferson; someone had a very interesting sense of humor," she says. "I've been there at sunset, and it's refreshing. I've noticed that people speak more quietly there."

**D.C. MARVELS:** Nancie Kennedy '79E (MM), Debbie Dorfman Drumheller '74, and Adam Konowe '90 (opposite, top to bottom) say that the nation's capital has cultural gems, outdoor opportunities, and out-of-the-way places that offer a richer view of D.C. and its attractions for those willing to explore beyond the well-known sites.





### **J National Arboretum**

Don't miss the National Arboretum, says Branche. "They have trees from all over the country there," she says. "Your tax dollars at work."

### **The Mall**

You have not fully walked the Mall until you've done it at night, says **Mia Alqadi Comrie '08**. Once darkness falls, footlights and spotlights illuminate the monuments and museums, lending drama to familiar views. "My favorites at night are the African-American Museum and the Jefferson Memorial—if you can have a favorite memorial."

### **K Vietnam War Memorial**

"It's one thing to see it on television," says Branche of the Vietnam War Memorial. "It's another to go see people interacting with it." The massive black granite memorial displays the engraved names of each of the more than 58,000 Americans killed in the war. "It gives it a kind of majesty. You don't think of Vietnam and majesty, but the memorial brings that word to mind."

### **L National Museum of African-American History and Culture**

Part of the Smithsonian, the National Museum of African-American History and Culture opened in September 2016. "What a beautiful place, in the broadest sense," says Branche. Tickets, she notes, are released months in advance and are snatched up quickly.

## **Right Place, Right Time**

"D.C. is a town of traditions, things you can go to every year," says Riddle during a walk down the hill from the Capitol. Sometimes the secret to seeing a familiar city anew is to come at a different time of year.

### **M High Heel Drag Queen Race**

A fall favorite for both Riddle and Drumheller, Dupont Circle's annual High Heel Drag Queen Race attracts thousands every October to watch elaborately costumed drag queens race down 17th Street. Drumheller also recommended a walk along Q Street during the Halloween season for a look at the residents' over-the-top decorations.

### **N Cherry Blossom Festival**

If you can time it right, both Comrie and Branche say the Cherry Blossom Festival is worth the hype. "When the blossoms are at their peak, it's an amazing time to walk around the Tidal Basin," Comrie says. "The event draws tourists and locals. It's quintessentially D.C. to see people walking around in their suits enjoying the cherry blossoms."

### **O Around the World Embassy Tour**

A long-standing tradition happens every May, when dozens of embassies coordinate to offer open houses one Saturday. "When I was a Girl Scout, we were at an embassy greeting people," says Branche, who grew up in D.C. "My best friend and I were stationed at the embassy of Iran."

## **Farther Afield**

For visitors, "the challenge is to get off the beaten path," says Konowe '90, whose daughter is a member of the Class of 2021. "More than most cities, the natural tendency is to do stuff on the Mall because it's so central. The Mall is no more emblematic of D.C. than Times Square is of New York City."

### **P The Steven F. Udvar-Hazy Center**

*Chantilly, Virginia*

Part of the Smithsonian's National Air and Space Museum, the Udvar-Hazy is much larger than its counterpart on the Mall. "Unlike a



## Regional Networks and You

The University of Rochester's regional networks offer alumni, parents, and friends a variety of social events, networking opportunities, and community service initiatives in Baltimore, Boston, Chicago, Houston, Los Angeles, New York City, Philadelphia, Rochester, San Francisco, and Washington, D.C., with new cities added regularly. Many volunteer opportunities also exist, and include organizing events, interviewing and mentoring students, welcoming new alumni to an area, and serving as social media ambassadors.

"Regional networks are central to keeping alumni, parents, and friends connected to each other and to the University of Rochester," says Paul Lanzone '03, assistant vice president of alumni and constituent engagement. "As an alumnus myself, I know firsthand the professional and personal benefits of staying involved, be it as a program participant or a volunteer who is helping to shape our community."

## How to connect

For more about the Washington, D.C., regional network, including upcoming and ongoing activities, social media connections, volunteer opportunities, and other information, visit the network's website at [Rochester.edu/alumni/dc](http://Rochester.edu/alumni/dc)

## D.C. Deep Dive

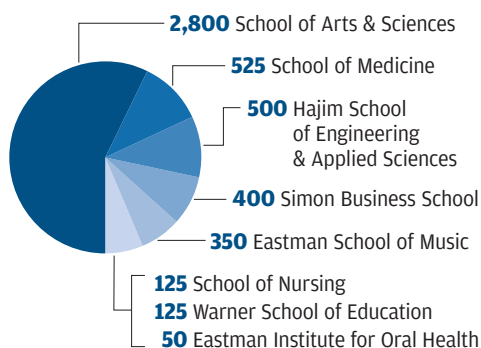
**4,600** alumni

**940** young alumni (10 or fewer years out)

**180** volunteers

**325** current parents

### Alumni by School



lot of museums where it's really about the exhibits and secondarily about the artifacts, Udvar-Hazy is all about the artifacts."

### WOLF TRAP NATIONAL PARK FOR THE PERFORMING ARTS

*Vienna, Virginia*

A favorite of Konowe's, Wolf Trap is the country's only national park devoted to the performing arts. Featuring the architecturally renowned Filene Center, it's also home to a smaller venue that hosts year-round performances and serves as the home to Wolf Trap Opera.

### GREAT FALLS NATIONAL PARK

*McLean, Virginia*

Across the Potomac from Maryland, Great Falls National Park is a favorite dog-walking spot for Comrie and her pup, Jake. "Once you get away from the falls, it's so peaceful and quiet even though you're so close to the city."



**MARKETPLACE:** Eastern Market is one of D.C.'s original public markets.

## Let's Eat

"Twenty years ago, D.C. was a food desert. Not today," Drumheller says. Branche described it as a proudly foodie town these days, with celebrity chefs and excellent cuisines from all over the world.

### UNION MARKET

*1309 5th Street NE*

For Comrie and Riddle, the D.C. food scene starts with its public markets. "Union Market embodies D.C.," Comrie says. All around, construction cranes in every direction speak to a neighborhood in transition. "You can walk around and create a meal with so many different styles and flavors. It's been really fun to watch it expand."

### EASTERN MARKET

*225 7th Street SE*

Eastern Market is one of Washington's original public markets and reminiscent of Rochester's, with rambling tables of produce outside and delis, butchers, and fishmongers within. "Here you see the vitality of the city," Riddle says.

### BETHESDA BAGEL

*1718 Connecticut Avenue NW and 120 M Street SE*

If you're looking for breakfast, it's "the best bagel in the city," says Drumheller. "I say that as a native New Yorker who grew up not far from H&H and Zabar's."

### FOUNDING FARMERS

*1924 Pennsylvania Avenue NW*

For brunch, Comrie recommends Founding Farmers, a restaurant



**MARKET TO MARKET:** “Union Market embodies D.C.,” says Mia Alqadi Comrie ’08 (above) of the District’s nationally recognized food hall; the nation’s capital offers much more than politics, says Dusty Riddle ’09S (MBA) (left). “People really live here. It’s not just the seat of government.”



born from an alliance of farmers in North Dakota. “Everything is fresh,” she says. “I love going on Sundays. They have amazing biscuits and great décor. It’s a warm environment, and the food is outstanding.”

**W All in the Neighborhood**

To sample D.C.’s food scene, Branche says, you need a strategy. One of her favorites is to pick one of the many spots close to the National Portrait Gallery in Penn Quarter. “I could go to a different restaurant there every night,” she says.

Her favorites include Zaytinya, Rosa Mexicano, Clyde’s, and Rasika. Zaytinya offers a Greek/Mediterranean tapas menu developed by celebrity chef José Andrés. Rosa Mexicano offers a fine-dining, white-tablecloth take on Mexican cuisine. Clyde’s is a D.C. institution, with wood-paneled booths and an attentive staff serving a menu of upscale pub food. On game nights at the Verizon Center nearby, don’t be surprised to see a healthy collection of Wizards and Caps jerseys at the bar. Rasika, just a couple of blocks away, features modern Indian cuisine.

Such vibrancy—exemplified in the people who make the District their home—is what makes the capital special.

Says Riddle: “People really live here. It’s not just the seat of government.” **R**



# Senior Studies

To cap off their senior year at Rochester, graduating students showcase their abilities as researchers, scholars, artists, and community members.



**A**s a computer science major with a minor in philosophy, Josh Pachter '18 was looking for a way to combine his interdisciplinary interests. The Lexington, Massachusetts, native found the perfect avenue when he was selected for the Senior Scholars Program, a Rochester initiative designed to support select students as they focus on a yearlong intellectual project.

Pachter set out to address some timely, practical—and philosophical—questions involving self-driving cars: can machines be trained to act ethically? And if so, how?

“It’s not a conventional research project done in a lab,” says Pachter. “It’s a combination of philosophy and computer science—lots of literature review and philosophizing.”

The project is one example of the kind of intellectual endeavor that many Rochester students undertake during their senior year. For some students, senior projects are part of the curriculum requirements for their departments, and for others, the motivation is grounded in the chance to engage in a scholarly, creative, or scientific endeavor. For all of them, the projects help bring their interests into focus and deepen their experience as Rochester students.

Here’s a look at some of this year’s projects.



**SENIOR SHOW:** For her senior thesis exhibition, titled *toxins*, Brianne Landwersiek '18 displayed a selection of work (above, left) at the Rochester Public Market. The studio art and public health double major was one of several seniors who capped their year with an exhibition featuring their work at galleries on campus and in spaces in the Rochester area.

**POWER OF DANCE:** Combining her interests in dance with her studies in biology, Erin Dong '18 (above) explored the physical and emotional manifestations of grief. She brought together science, emotion, and creative movement in a performance called “The Beautiful Awful: Experiencing Grief Through Movement,” which she presented at the end of the academic year.



## The Biology of Grief—through Dance

Erin Dong '18 knew from a young age that she wanted to study biology. While at Rochester, she supplemented her coursework with stints as a volunteer in rehabilitation physical therapy at the Medical Center and as a research assistant in the School of Nursing.

But what surprised her was that she also developed a love of dance, leading to a double major in both biology and dance.

For her senior project, Dong created a dance called “The Beautiful Awful: Experiencing Grief Through Movement” that

combines aspects of both her majors. Along the way, she learned lessons about the creative process, taking risks, and the wisdom that can come from failure.

“I only started dancing when I came to college,” Dong says. “But I love how it’s this universal way of expression. I wanted to help people remember the loss they felt and experienced, connect to others who also shared that, and allow them to feel the emotions in their entire bodies, not just in their heads.”

Dong started her project by examining other performances,



**WALKING TALLER:** Rosemary Buckley, the daughter of Mark Buckley, an assistant professor of biomedical engineering, tests a walker designed by a team of senior engineering students, including Jennifer Choi, Devan Foggio, and Jo Cappotelli. (Team member Daniel Myers is not pictured.)

## Building a Better Walker

For young children with Down syndrome, cerebral palsy, and other developmental disabilities, learning to walk can be a long-term process. In the meantime, the children find it hard to keep up with their peers, which can increase their social isolation.

A team of biomedical engineering majors, working with Leah Talbot, a Rochester-area physical therapist, hopes to address both issues with an inexpensive, “hybrid” walker that will be portable enough to accompany the children wherever they go.

“This is right up our alley,” says Joe Cappotelli ’18, whose senior design project teammates Hyun Jennifer Choi ’18, Devan Foggio ’18, and Daniel Myers ’18 developed a prototype for a less expensive, more therapeutically sound walker. The design consists of a frame of relatively light-weight plastic tubing, an adjustable harness to support a child, a steering column, and an axle assembly to propel everything.

As the students surveyed commercially available walkers, they found two main options. One kind enabled 3- to 5-year-olds to keep up with their peers, but weren’t very helpful from a therapeutic standpoint because they didn’t require children to propel themselves. Walkers used in clinical settings, on the other hand, were often bulky and expensive—great for therapy, but not for keeping up with more mobile playmates, or for taking home.

The team “has definitely come up with a very unique idea to help children with motor delays learn to walk in a fun and active way,” Talbot says. “Ideally this motorized walker will allow these children to access their environment to play with their peers while improving their cognitive, motor, and social skills.”

—BOB MARCOTTE

specifically work by Bill T. Jones and the dance company MBDance, which visited Rochester in January.

At about the same time, her beloved grandmother, Peggy, passed away. While at a conference in Boston, she saw a dance by students at Bates College in which choreographers had asked people how they would spend their last days on Earth. The dancers’ movements mirrored the answers, which ranged from “sitting and watching the sun rise” to “eating a gallon of ice cream with my childhood sweetheart.”

“Seeing this dance is when I finally cried about my grandmother, because I was able to connect to the joy, but also the pain and the sadness, evident onstage,” Dong says. “The piece really coaxed out my emotion and gave me a safe space to feel.”

She wanted to create a similar kind of space in her own dance, one in which people would have an outlet to grieve freely. She turned to her knowledge of anatomy and physiology to create a piece that incorporated both the emotional aspects and the physical symptoms of the grieving process.

Her faculty mentor, Anne Harris Wilcox, a senior lecturer in the Program of Dance and Movement, says building on such a broad understanding of the body’s anatomy and mechanics, and the functions involved in movement, are important in dance.

Dong’s final product was a meditation on grief that brings together science, emotion, and creative movement. But it’s the lessons she learned from the process that Dong will carry with her. This summer she starts a three-year doctoral program for physical therapy at the University of Pittsburgh.

—LINDSEY VALICH

# Making Diabetes Screening Portable

The diabetes that's endemic in Micronesia is a legacy of modern store-bought foods and a less strenuous lifestyle than South Pacific islanders enjoyed before the encroachment of Western culture. But detecting and treating the disease in Micronesia is complicated by the fact that electrical power and cell phone coverage is erratic or nonexistent in many of the remote villages and outer islands. Moreover, many of the inhabitants are distrustful of Western medicine, and reluctant to travel to clinics or hospitals for help.

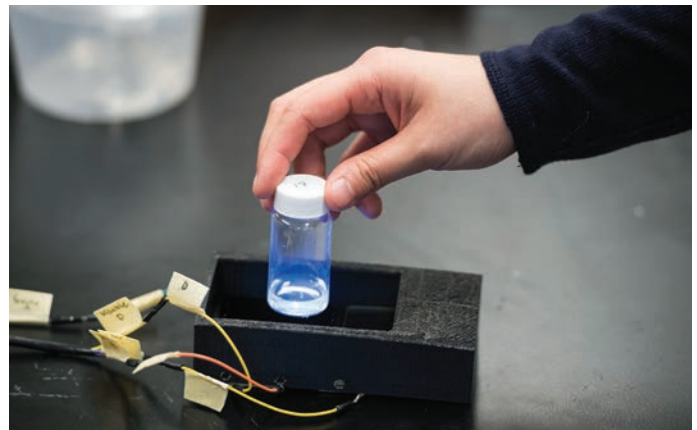
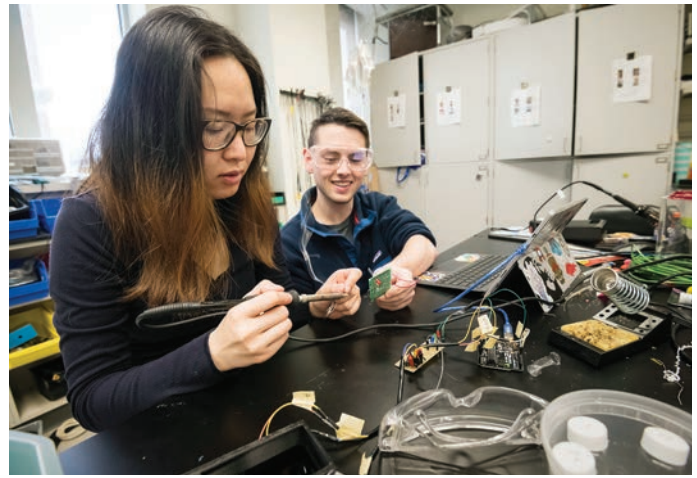
To address such challenges, four biomedical engineering students worked with Timothy Dye, a professor of obstetrics and gynecology at the Medical Center, on a portable diabetes screening device that could be carried by health workers into remote areas. The device could make it easier to identify people at high risk of the disease. Dye's research team is eager to test such a device on Pohnpei Island.

"This would help start the educational process with people who are kind of scared of Western medicine and who think hospitals are where you go to die," says Matt Boulanger '18, who was part of a senior design team that also included Jack Hayden '18, Fredella Lee '18, and Sue Zhang '18.

The students took their cue from a Dutch technology that uses skin tissue as a biomarker of diabetes and other age-related disorders. The team came up with a device that looks like a small black box with an opening where a patient's arm is placed for screening. A form of ultraviolet light bounces off the skin to detect biomarkers for diabetes. While there's more research and testing to do, faculty members in biomedical engineering and optics were impressed.

"This is exactly what we want—something that's portable, easy to use, and can help us provide some actual clinical information in the field and is not just estimating risk based on weight and symptoms," says Dye.

—BOB MARCOTTE



**TEST TAKERS:** Seniors Sue Zhang and Matt Boulanger (top) work on a device that uses ultraviolet light (above) to help identify biomarkers for diabetes. The team developed the portable screening device for use in testing people living in remote areas of Micronesia.

# Engaging the Community

As a senior selected for a new initiative, Leslie Kaze '18 set out to share her academic interests as a public policy major with the Office of Mental Health Promotion in Rochester.

Among the first students at Rochester to receive a citation in community-engaged scholarship, Kaze and a handful of other seniors completed capstone projects in which they worked with nonprofits and other organizations as a way to help address local, national, and global challenges while weaving their connections to the community into the curriculum.

Administered by the Rochester Center for Community Leadership, the program pairs students with a faculty mentor to work with a community organization. For her project, Kaze worked with Anne Marie White, director of the Office of Mental Health Promotion, to explore how social stigma might keep church-going African-American millennials from using mental health care services. Others in the first group were Emma Baker '18, a studio art major who worked with Taproot Collective in Rochester with Heather Layton, a senior lecturer in the Department of Art and Art History; Katherine Bakrania '18, a political science major who worked with the Monroe County Division of Child and Family Services in Rochester with Stu Jordan, an associate professor of political science; Katheryn Lapusnak '18, a political science major who worked with LifeMoves in Menlo Park, California, also with Jordan; Shoshana Preuss '18, a health,



**COMMUNITY NEWS:** During a poster session this spring, Leslie Kaze '18 (left) shares her project in community-engaged scholarship with associate professor Nancy Chin (center) and President Richard Feldman (right).

behavior, and society major who worked with Common Ground Health in Rochester with Ted Brown, the Charles E. and Dale L. Phelps Professor of Public Health and Policy; and Samantha Stoma '18, a health, behavior, and society major who worked with Bethany House in Rochester with Nancy Chin, an associate professor at the Center for Community Health and Prevention. —JIM VER STEEG



## Engineering a Better Guitar

Juan Estrella '18 is a classical guitarist who chafes at the constraints traditional instruments place on artistic expression.

“We can still create great art, but not as great as it would be with better tools,” he says.

Estrella, who was in the audio and music engineering program, is attempting to create a “new electronic musical interface” that would free musicians from those constraints—and set a new standard for instrument design.

This is not just a senior design project, Estrella says. “I regard it as my life’s work.”

A traditional six-string guitar has a range of only three octaves. Two hands are required to produce a single note: One to fret, the other to pluck. “That’s really inefficient,” Estrella says.

What does he have in mind?

“Basically, think of an elliptical guitar neck, two feet long, with 48 frets and 14 strings that go all the way around,” Estrella says. “Retractable legs on both ends lift it off the table.”

The instrument will produce tones over 12 octaves—using just the three strings on top of the neck. Tones are generated by simply pressing the strings against a touch screen wrapped around the underlying surface.

In other words, no more plucking. Both hands are free to fret chords and scales, while simultaneously adjusting pitch, volume, vibrato, speed, loop, distortion, or any other user defined effect, thus making guitar foot pedals obsolete as well.

The idea is to create tones that merge together in a continuous sequence, like a singer’s voice—not in discrete notes, or “chunks,” which is still the case even with many of the new musical interfaces on the market, Estrella says.

Estrella has completed the neck and the stands and has attached



**SOUNDER SYSTEM:** Juan Estrella works on an electronic musical interface that he hopes will give musicians a much greater range of possibilities for making music than that offered by traditional instruments.

the strings. The next challenge is creating a touch screen and coming up with the electronics needed to process as many as 672 inputs.

“That’s a tough engineering problem,” says David Anderson, an assistant professor of electrical and computer engineering, who supervises the audio and music engineering senior design projects.

“But it’s a neat path that Juan’s going down.”

In September, Estrella will enter the University’s technical entrepreneurship and management (TEAM) master’s program—the next step on his path to eventually starting his own company.

“I’ve never felt any ambiguity about my purpose in life, or what I’m supposed to be doing,” Estrella says. “There is nowhere else I’d rather be.”

—BOB MARCOTTE

# The Ethics of Autonomous Vehicles

When it comes to self-driving automobiles, Josh Pachter '18 hopes to create ethical machines through a process similar to how humans raise children. A computer science major with a philosophy minor, Pachter spent the year studying whether autonomous vehicles could learn to be more ethical.

He found that machine learning is plagued by forms of bias when programmed by humans, who bring their own moral frameworks to their work. Examples of bias include hugging the side of the road too closely or choosing to run over one group of humans rather than another based on arbitrary factors.

"If we expect autonomous cars to drive better and safer than we do, we should provide the groundwork," he says. "We can provide some fundamental moral truths, and through a training process, the machine will ultimately learn to make good higher-level decisions without the need for bad input from its parents—humans—who are actually bad drivers."

Pachter's advisor, Hayley Clatterbuck, an assistant professor of philosophy, says Pachter's synthesis of complex theories in both fields generated "fascinating" results.

"His project truly embodied the promise and necessity of interdisciplinary work. If we use machine learning to train autonomous vehicles, which machine-learning approaches should we use and on which data should we train them? Josh examined various cutting-edge machine-learning processes to determine which problems they are most apt to solve. Then, he considered what kind of problem morality is, a surprisingly complicated topic that raises many important questions."

Last summer, Pachter landed an internship at Amazon's Seattle headquarters. He was hired before returning to school and will begin work this September as a software development engineer. —JIM MANDELARO



**FOOD FOLLOWERS:** Seniors Teron Russell, Chris Smith, Stephen Cohen, and Vivian Li developed an app to manage and inventory items in a fridge, freezer, or pantry.

## Using an App to Reduce Waste

Vivian Li '18 lives off campus and cooks all of her own food in order to save money. There's one drawback. "I sometimes leave food in the fridge, and oh, two weeks later, it's fuzzy," she says.

She may soon have an app for that. One she helped create.

Li was the project lead on a student team that worked to design Pip, a voice-enabled mobile application for smart home assistants like Google Home and Amazon's Alexa to help users manage their food inventory and balance their grocery budget. The project was a senior capstone for the Digital Media Studies Program, where eight senior projects emerged from a seminar course taught by Michael Jarvis, an associate professor of history and the director of Digital Media Studies, and Stephanie Ashenfelder, the program manager for studio art in the Department of Art and Art History.

Rounding out the team were Teron Russell '18, Christopher Smith '18, Matthew Burg '18, and Stephen Cohen '18.

Jarvis says that while students use their experience in the class to find success in many ways. "We have about a 95 percent job or career placement rate right now," he says. "They either wind up working for the IBMs, Googles, and Spottifys out there or marketing firms." —JEANETTE COLBY



**SHOWCASES:** Senior art shows included work by Ruoxue (Astra) Chang '18 (left) and Alexandra Cunningham '18.

## An Art Exhibition of Their Own

Studio arts majors in the Department of Art and Art History capped off their senior year with an art thesis exhibition. During the spring, their work was on view in galleries on the River Campus and in the Rochester area. The 10 students graduating this year explored several themes in their shows, including the intersection of the food and pharmaceutical industries, social interaction and anxiety, and the role of the professional artist in society. The installations featured a variety of media, including acrylic on canvas, video, and audio materials. —Jeanette Colby



**DOCUMENTING DEMOCRACY:**  
“Our goal is to take what we’ve learned from our scholarly work on other parts of the world and bring that perspective to public debates about the quality of democracy in the United States—its vulnerabilities as well as its sources of resilience,” says political scientist Gretchen Helmke. With colleagues at Yale and Dartmouth, she has launched an initiative to survey opinions about democracy, both among the public and political scientists.

# Drawing a Bright Line

Political science professor Gretchen Helmke monitors the state of U.S. democracy.

By Sandra Knispel

**G**retchen Helmke lives and breathes democratic principles. She and her grade-school daughter once drafted an outerwear constitution, signed and ratified by both. Not unlike the constitutions of the nations she studies, the precise meaning of the language of the family outerwear law proved less clear-cut than its framers intended. Helmke sighs at the sight of the constitution that remains pinned to the family's kitchen bulletin board.

"It's a law that remains on the books, but is dead in spirit," she admits.

It's a familiar scenario for the Rochester political science professor who studies constitutional crises—albeit usually ones in Latin America, where the consequences of failed democracies have been dire.

These days the Latin Americanist spends a good chunk of her time monitoring democratic institutions in the United States. The health of such institutions relies, in part, on their perceived legitimacy. She worries that, for many Americans, that legitimacy is in question.

"Growing polarization is what I am most concerned about," says Helmke. With public trust at historic lows and partisanship riding high, she's not alone in her worries. For many Americans, democracy seems more imperiled now than at any time in living memory.

Simply put, one of the greatest threats to democracy is the idea that it is unassailable. That's the tagline of Bright Line Watch, a non-partisan initiative founded by Helmke and three other political scientists—Brendan Nyhan and John Carey of Dartmouth College and Susan Stokes of Yale University.

Two of the three other scholars Helmke already knew well: Stokes was her dissertation advisor at the University of Chicago; Carey, who taught at Rochester before Helmke arrived, recalls being aware of Helmke's research when she was still a graduate student. "Her work was great—like the kind of scholarship I hoped to produce myself,"

Carey, then a junior faculty member, remembers. "When you become aware of a scholar like that, you look for opportunities to collaborate."

The project found its *raison d'être* in the widespread concern over the possible erosion of democratic institutions in this country, says Helmke. The quartet writes that "at a time of potential danger to American democratic norms and institutions, it is more urgent than ever for scholars to highlight the risks to our system of government."

Supported by grants from the Democracy Fund and the Hewlett Foundation, the group set out in the aftermath of the 2016 presidential election to monitor democratic practices in the United States, the system's resilience, and potential threats.

Robert Blair, the Joukowsky Family Assistant Professor of Political Science and International and Public Affairs at Brown University, is the coordinator of a multi-university collaborative course on democratic erosion—taught simultaneously at nearly two dozen universities across the United States and one in the Philippines. Blair says Bright Line Watch has been "extremely valuable" to the consortium. "Students at several participating universities, including Brown, have gotten their hands dirty working with the BLW data. Their survey instrument has given students a lot to think about in terms of what democracy means and how to measure it," says Blair.

He's noticed that, generally, students become more optimistic about the United States after taking the course, attributing that change, in part, to the students' becoming more "expert" in their understanding of democracy and democratic erosion worldwide. "This is quite similar to what Bright Line Watch finds—that experts tend to be more optimistic than the public."

Blair says the democratic erosion consortium is planning more ways to integrate the two initiatives in the future.

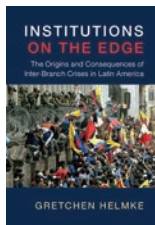
Helmke underscores that Bright Line Watch is not concerned with policy disagreements. Instead, the group focuses on the institutions of democracy, such as free and fair elections, the effectiveness of checks and balances, and the freedom of the press.



## Gretchen Helmke

Professor of Political Science  
Chair, Department of Political Science,  
2011-2013 and 2014-2017

### Major Publications



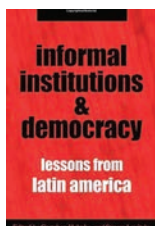
*Institutions on the Edge: The Origins and Consequences of Institutional Instability in Latin America* (Cambridge University Press, 2017) considers interbranch conflict and how a crisis in one branch of government can spill over

to another. Helmke concludes that concentrating power in the presidency triggers political crises across all three branches of government. Surprisingly, often the most constitutionally powerful presidents prove the most fragile, she finds.



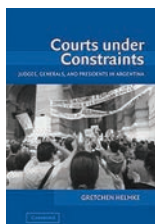
*Courts in Latin America*, coedited with Julio Ríos-Figueroa (Cambridge University Press, 2011) examines to what extent courts in Latin America protect individual rights and limit governments. Drawing

on examples from Argentina, Brazil, Chile, Mexico, Colombia, Costa Rica, and Bolivia, the authors demonstrate widespread variation in the performance of Latin America's constitutional courts.



*Informal Institutions and Democracy: Lessons from Latin America* (Johns Hopkins University Press 2006), coedited with Steven Levitsky, analyzes the function of informal institutions in Latin America and how they

support or weaken democratic governance. Drawing from a wide range of examples, the contributors examine how informal rules shape the performance of state and democratic institutions, including contemporary problems of governability, the “unrule of law,” and the absence of effective representation, participation, and accountability in Latin America.



*Courts Under Constraints: Judges, Generals, and Presidents in Argentina* (Cambridge University Press 2005) grew out of Helmke's dissertation about Argentine courts and why some

deferred to the president while others were independent. Helmke concluded that courts sometimes look independent of the current government when in fact they are already currying favor with the next government.

“Our goal is to take what we've learned from our scholarly work on other parts of the world, and bring that perspective to public debates about the quality of democracy in the United States—its vulnerabilities as well as its sources of resilience,” says Helmke.

To that end, Helmke and her three collaborators compile quarterly reports, based on careful scientific polling of about 1,000 political experts (all of them political science professors at U.S. universities) and a nationally representative sample of 2,000 members of the public. Aiding the group in the design of its surveys is Mitch Sanders '97 (PhD)—a fellow political scientist, and Helmke's husband, who sometimes jokingly refers to himself as “the fifth Beatle.” The results of their survey are “sobering,” the group says.

According to Helmke, on the one hand, the chances of a complete breakdown of democracy in the United States—the kind that occurred in the 20th century in parts of Latin America—are slim. A military-coup-style breakdown, for example, is highly unlikely. Scholars have studied the statistical likelihood of such an event by looking at the relationship between levels of wealth in a given nation and the likelihood of a democratic breakdown. They would put the chances of something like that happening in the United States near zero, she argues—based not only on the overall wealth in the United States, but also on the longevity of American democracy. Research shows that the age of a democracy serves to protect it. The longer, the stronger.

But on the other hand, a gradual erosion of democracy may be at work. “That process—where it's a slow, kind of piecemeal challenge to different institutions that support democracy—is something that we see in several parts of the world, and something that we are now seeing in the United States,” Helmke says.

The group released its fifth survey in May. The participants were given a battery of 27 questions, on topics ranging from free speech and an unimpeded press, to constitutional limits on executive powers, vote representation, and the independence of the judiciary. Helmke and her colleagues detected a significant decrease in confidence on all but four questions, especially in the areas of press freedom, judicial independence, and the integrity of government agencies, among the public sample in the past six months. While those who approve of President Donald Trump rated U.S. democratic performance more highly than those who disapprove, both groups' assessment of U.S. democracy's health declined.

Scrutinizing the U.S. political system on a regular basis was originally not on Helmke's radar. A California native, she began her graduate studies at the University of California at Berkeley, and completed them at the University of Chicago, where she earned her PhD in 2000 under Stokes, who was then a faculty member there. Her dissertation was a study of Argentine courts.

“When she started this work, very few Latin Americanists or comparative politics scholars were studying them,” remembers Stokes, who is now the John S. Saden Professor of Political Science and the director of the Yale Program on Democracy. “Gretchen developed a simple but highly sophisticated model to explain her interesting and, in some ways, surprising findings.” Among those findings was the realization that courts sometimes look independent of the current government when in fact they are already currying favor with the next.

When Helmke first started conducting her field research in Buenos Aires some 20 years ago, it turned out to be an adventure, of sorts. It dawned on her pretty quickly that despite her nearly fluent Spanish, she wasn't getting anywhere fast. In 1997, for a graduate student with no established reputation in the field and little experience, doors didn't exactly fly open. Studying one of the most politicized institutions in Argentina—the Argentine Supreme Court—she often didn't even know on which ones to knock.

“It's very unusual for a young American woman to go to the Supreme Court and ask them what they're doing,” says Helmke.

Helmke would soon learn that in a country like Argentina, she first needed to gain access to the right political networks in order for its key members to help open doors for her and to point her in the right directions. Even looking the part became important. Her student outfit—jeans, a backpack, and tennis shoes—just didn't cut it.

“To be taken seriously by local elites you needed to wear heels and a suit, and carry a bag,” Helmke says. “And you needed business cards.”

Fast forward to today. She's long ditched the heels. On most days, a simple white canvas bag, bearing the logo of a public radio station, holds her iPad and necessary papers. The sneakers have returned. Now the author of multiple scholarly works, she has received prestigious fellowships from the Kellogg Institute for International Studies at the University of Notre Dame, the Weatherhead Center for International Affairs at Harvard University, and the Woodrow Wilson International Center for Scholars in Washington, D.C. In 2016 Helmke became a full professor.

As a PhD advisor, Helmke has influenced a new generation of scholars. One is Rabia Malik '16 (PhD), currently a postdoctoral associate in political science at New York University Abu Dhabi. Helmke's advice and mentorship "were invaluable to me as a grad student and that hasn't changed since I left," says Malik, who recalls that the road to finding her dissertation topic was anything but linear. "Through the endless months of chasing different ideas that all resulted in dead ends, Gretchen was the one who didn't let me lose hope, despite my fears that I was falling behind. Without her supporting me that way, there's no way I could've completed my PhD, to be blunt."

Last fall, Helmke embarked on a new project, tentatively titled "To My Enemies, the Law"—an utterance attributed to Brazilian President Getúlio Vargas. In it, Helmke looks at the frequency with which Latin American leaders are put on trial within 10 years after leaving office. With the research assistance of political science honors student Adriana Tobar '18—who has been gathering data on all Latin American leaders since 1980—Helmke can say with confidence that more than a quarter of all democratically elected leaders in the region were, indeed, tried after losing office.

She's now working on a theoretical model to try to understand under what circumstances corruption trials are used as political weapons, and when they actually serve as legitimately working mechanisms of democratic accountability.

The approach illustrates how Helmke's expertise in democratic political institutions and the rule of law—regardless of geographic location—lends itself to Bright Line Watch. Scrutinized in a wider, international context of democratic erosion, certain domestic patterns might become apparent and be recognized more easily.

As the group mulls over the results of its latest survey—and a growing number of media outlets, including the *New York Times*, *Washington Post*, and *Wall Street Journal* take notice—they've begun to ponder important hypotheticals. Would violating a democratic principle that most citizens agree on as being vital trigger a defense of American democracy? Would political leaders act against their own immediate partisan interests to protect a higher ideal? And what would be the violation threshold for such a response to occur?

Helmke says her Bright Line work reminds her of a sentence uttered by a then little-known, 28-year-old lawyer. A gifted orator, he would later go on to become one of the most influential presidents of the United States. In one of his first published speeches—the so-called Lyceum Address—given 23 years before the Civil War, Abraham Lincoln talked about threats to the rule of law and political institutions in the United States.

"We hope all dangers may be overcome, but to conclude that no danger may ever arise would itself be extremely dangerous," Lincoln cautioned his audience.

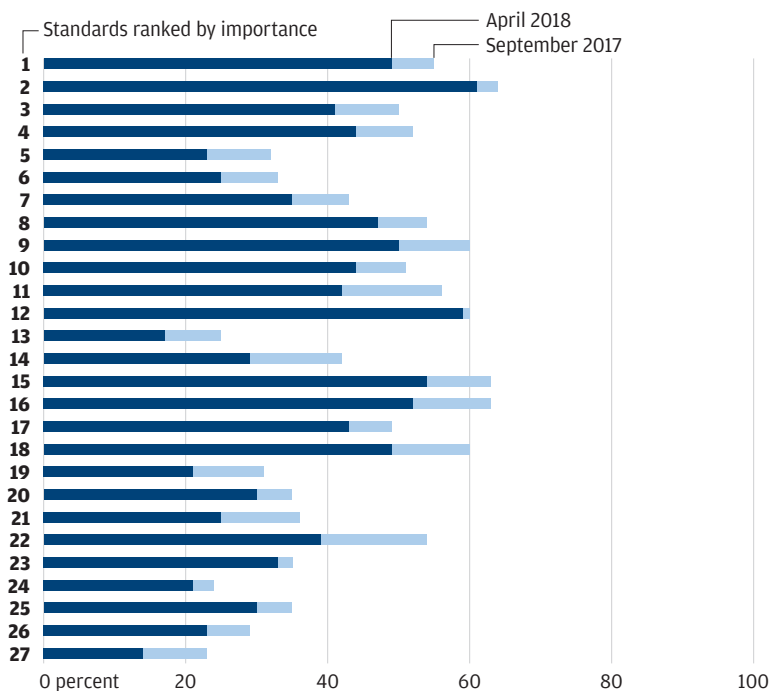
And these days, being aware of such dangers, Helmke says, is more important than ever. **R**

*Listen to a Quadcast conversation with Gretchen Helmke and Mitch Sanders: <http://urochester.libsyn.com/website/2018/04>.*

## Keeping an Eye on Democracy

Bright Line Watch periodically surveys an expert sample of about 1,000 political science faculty at American universities and a nationally representative sample of 2,000 adults. Each group is asked to rate the importance of 27 democratic standards and to assess how they are currently upheld in the United States. Here is a comparison of the public sample's responses from September 2017 and April 2018.

### Public Belief That Democratic Standards Are Mostly or Fully Met



### Democratic Standards

- Elections are conducted, ballots counted, and winners determined without pervasive fraud or manipulation
- All adult citizens have equal opportunity to vote
- All adult citizens enjoy the same legal and political rights
- Citizens have access to information about candidates that is relevant to how they would govern
- Law enforcement investigations of public officials or their associates are free from political influence or interference
- Government officials are legally sanctioned for misconduct
- Elections are free from foreign influence
- Executive authority cannot be expanded beyond constitutional limits
- Citizens can make their opinions heard in open debate about policies that are under consideration
- All votes have equal impact on election outcomes
- The elected branches respect judicial independence
- Government protects individuals' right to engage in peaceful protest
- Government officials do not use public office for private gain
- Government agencies are not used to monitor, attack, or punish political opponents
- Parties and candidates are not barred
- Government protects individuals' right to engage in unpopular speech or expression
- The legislature is able to effectively limit executive power
- The judiciary is able to effectively limit executive power
- Even when there are disagreements about ideology or policy, political leaders generally share a common understanding of relevant facts
- Voter participation in elections is generally high
- The geographic boundaries of electoral districts do not systematically advantage any particular political party
- Government does not interfere with journalists or news organizations
- Information about the sources of campaign funding is available to the public
- Public policy is not determined by large campaign contributions
- Government effectively prevents private actors from engaging in politically motivated violence or intimidation
- Elected officials seek compromise with political opponents
- Political competition occurs without criticism of opponents' loyalty or patriotism

SOURCE: BRIGHTLINEWATCH.ORG