



KAMENY IS HONORED at the White House in 2009. (Photo by Pete Souza/White House.)

Court in 1960. Unable to find legal representation, Kameny drafted a 64-page petition requesting that the court hear his case. It refused to do so.

Nonetheless, Kameny continued his work advocating for gay rights and social justice. He led the Mattachine Society of Washington, DC, organized the first gay rights picket at the White House in 1965, petitioned Congress, and educated people across the country. When Wentworth, Norton, and others sought Kameny's help in regaining their security clearances, he served as their *de facto* lawyer in court. He eventually won pivotal cases, including the ones for Went-

worth and Norton, and paved the way for broader inclusion of the LGBTQ+ community in government positions.

In 1969, Kameny turned his attention fully to advocacy. In 1971, he became the first openly gay candidate to run for Congress. The next year, he helped force the American Psychiatric Association to hold a panel at its annual meeting to discuss the classification of homosexuality as a mental illness. At the panel, he and other gay rights activists rebutted its classification, and at a later special session on homosexuality, Kameny served as the chief discussant. His actions played a pivotal role both in the associa-

tion's 1973 decision to declassify homosexuality as a disorder and in the Civil Service Commission's reversal of Eisenhower's executive order two years later.

Until his death in 2011—on 11 October, National Coming Out Day—Kameny continued to influence public policy and advocate for equal rights. He became involved with local politics: serving on Washington, DC's Human Rights Commission, assisting in the repeal of the district's sodomy law, and becoming a staunch advocate for DC statehood.

Although progress has been made in the nearly 70 years since Kameny's dismissal from the Army Map Service, LGBTQ+ physicists today say they often feel excluded by the physics community (see "To retain and inspire LGBT+ physicists, welcome them," *PHYSICS TODAY* online, 2 June 2022). In a 2022 survey of 324 LGBTQ+ physicists, 36% had considered leaving their workplace in the previous year because of unwelcoming environments, and 22% reported experiencing discrimination firsthand. The discrimination figure reached 49% for transgender physicists.

As a community, physicists continue to fail their LGBTQ+ colleagues. Only by improving the communities we inhabit, particularly for those of marginalized backgrounds, can physics excel.

Kai Hostetter-Habib

A reference list can be found at <https://physicstoday.org/kameny>.

Q&A: Physicist Karen Hallberg is the new Pugwash secretary general

The organization relies on science diplomacy in seeking solutions to global threats.

In a time of nuclear escalation, including Russia hinting it might use nuclear weapons, says Karen Hallberg, "the situation is much riskier than anytime during the Cold War, except maybe the Cuban missile crisis." The threshold of nuclear confrontation is at an all-time low, says the theoretical physicist at the Balseiro Institute in San Carlos de Bariloche, Argentina. "The Doomsday Clock of the *Bulletin of the Atomic Scientists* is

closer to midnight than ever. The situation is horrible." But, she continues, "There is so little public awareness. It's not on anyone's agenda."

It's certainly on hers. On 1 January, Hallberg took the mantle as secretary general of the Pugwash Conferences on Science and World Affairs. Established in 1957, Pugwash is focused on the elimination of weapons of mass destruction through science diplomacy. The organi-

zation shared the Nobel Peace Prize in 1995 with its cofounder Joseph Rotblat.

Hallberg previously served for two decades on the organization's governing board, the Pugwash Council. In her new role in the top leadership, she is responsible for organizing Pugwash activities and overseeing the group's international offices, financial transactions, and official correspondence. She works closely with Pugwash president Hussain Al-Shahristani. The nuclear chemist, she notes, was imprisoned in Abu Ghraib for 11 years because he refused to collaborate on a nuclear weapon for Iraq. His "courageous stance against nuclear weapons and his scientific approach to policymaking represent the core values of the Pugwash Conferences," says Hallberg.

Throughout her career, Hallberg says, she has been dedicated “both to science and to the ethical responsibilities of being a scientist.” That has included participating in outreach for women and people from disadvantaged backgrounds, representing Argentina and, more broadly, Latin America in international scientific forums, and protesting funding cuts to Argentina’s universities.

PT: How did you get interested in physics?

HALLBERG: I was always interested in science. When I was about 10, I had a science club with five or six girlfriends. We solved mysteries and did experiments. And we were very formal—with a president, a secretary, and someone who recorded the minutes of our meetings.

I was aware from an early age that there were not many women in science. I took that as a challenge. And when my dad told me about Einstein’s theory of relativity, and that very few people in the world understood it, I took that as a challenge too.

I wanted to do something disruptive, especially as a woman.

PT: Why did you go into theoretical physics?

HALLBERG: As an undergraduate, I was measuring high-temperature superconductors in a low-temperature lab. It was 1986, right when high-temperature superconductors were discovered. The Bariloche Atomic Center had a good materials lab and was fast in synthesizing the new superconducting materials. We measured resistivity and critical magnetic fields. It was fascinating to be immersed in this crazy thing as a student.

PT: So why did you switch out of such a hot field?

HALLBERG: I got a bit scared about the level of demand in high-temperature superconductors. Even though they were extremely interesting times, I didn’t think it was compatible with my idea of raising a family.

I spoke to a professor, who became my PhD adviser, and said, “I want to do theory.” I told him I liked analytical calculations but that I did not want to have anything to do with computer calcula-



KAREN HALLBERG. (Photo courtesy of Karen Hallberg.)

tions. Over time, another PhD student taught me how to do computer simulations for strongly correlated systems. By the time I was finishing my PhD in 1993, I was completely immersed in it.

PT: How did you become involved with Pugwash?

HALLBERG: I used to engage in very interesting discussions on the social responsibility of scientists, nuclear weapons, and other related issues with my undergraduate professor of relativistic quantum physics, Luis Masperi. He was a member of the Pugwash Council, and he introduced me to the organization. I was invited to my first meeting, in Querétaro, Mexico, in 1998. I’ve been involved ever since.

We formed a local chapter of Pugwash in Argentina in 2000. It fizzled out, but two years ago, we formed a group again. And now that I am more devoted to Pugwash, we want to start doing local things again.

PT: What sorts of local things?

HALLBERG: Since the new government came to power in December 2023, sci-

ence is in a dire situation in Argentina. Now we have science denialism, lack of funding, no journal access. Researchers do not get grants. Salaries have decreased by 30% in real value because of inflation. The universities are really suffering. This year was the first time we did not have any new PhD students at our institute. Not one. We are suffering a big brain drain.

In Pugwash, we work to convey to the general public the importance of science and how difficult it is to build up again after a period of lack of support. We want the public to realize that science is an important part of our culture and that it is important to bring knowledge to decision making.

PT: What is the nuclear situation in Argentina?

HALLBERG: Argentina has a strong peaceful nuclear program. We get about 7% of our power from nuclear energy. And a state-owned company exports small multipurpose nuclear reactors for research and for production of radioisotopes for medical, industrial, and environmental applications. They can also serve as a source of neutrons.

ISSUES & EVENTS

Argentina has signed many nuclear agreements, but it is the only country in Latin America that hasn't signed the Treaty on the Prohibition of Nuclear Weapons, although it is still considering doing so.

PT: You say the nuclear situation has become very risky today. Can you elaborate?

HALLBERG: Several nuclear treaties are becoming weaker. For example, the NPT—the Treaty on the Non-Proliferation of Nuclear Weapons—is being undermined, since the five original nuclear weapons states (the US, the UK, France, Russia, and China) are not abiding by their agreement to reduce their reliance on nuclear weapons and to aim at their elimination. On the contrary, they are increasing their nuclear stockpiles.

Also, in a year's time, in February 2026, the only remaining bilateral nuclear agreement between the US and Russia, New START, will expire. There are absolutely no conversations to renew it.

The wars in Ukraine and in Gaza have increased the risk even further. We are hearing explicit threats of use of nuclear weapons breaching the nuclear taboo. And the withdrawal of the US from the Iran nuclear deal several years ago was a serious step back in nuclear security. The whole system of nuclear agreements is crumbling.

PT: Where does Pugwash come in?

HALLBERG: In Pugwash, we try to bring people together who think in different and even opposite ways. We want to try to talk with governments.

It's not only about nuclear disarmament. We also have working groups on AI, biological and chemical weapons, and other topics.

There are many issues we want to tackle. We want to foster science diplomacy to help bring peace to conflicting regions, to build confidence, and to solve technical problems. And our networks are important.

We also think it's important to raise awareness among young people about the increased nuclear risk and to incentivize them to think of how science can help humanity. It's fundamental to



KAREN HALLBERG (left), secretary general of the Pugwash Conferences on Science and World Affairs, with Masako Wada, a nuclear bomb survivor and assistant secretary general of Nihon Hidankyo, the organization that won the 2024 Nobel Peace Prize. (Photo courtesy of Karen Hallberg.)

bring in young people to participate in our meetings.

PT: How will Pugwash navigate the worsening nuclear environment?

HALLBERG: We will strengthen the scientific aspects, bringing knowledge to decision making. Following the tradition of Pugwash, we will hold consultations between conflicting sides, fostering dialogue and connections that are currently hindered or nonexistent.

We will also cooperate with kindred organizations. The current situation with increasing tensions and threats requires we all work together to halt escalation, reduce the nuclear threat, and aim toward nuclear disarmament.

PT: What are some of your recent or upcoming Pugwash activities?

HALLBERG: In December, I traveled to Oslo to represent Pugwash at the Nobel Peace Prize ceremony. The 2024 prize went to the Japanese organization Nihon Hidankyo, a grassroots movement of

survivors of nuclear weapons. While there, I spoke on a panel about nuclear risks. And we are organizing a big meeting in Hiroshima next November for the 80th anniversary of the bombings, the 70th anniversary of the Russell–Einstein Manifesto—a call to world leaders to seek peaceful resolutions to conflicts—and the 30th anniversary of the Nobel Peace Prize to Pugwash.

PT: How do you use your physics in your Pugwash work?

HALLBERG: Of course, I bring my technical knowledge. But for science diplomacy, my scientific training is also helpful. People are used to having discussions where they stick with what they think and there is no exchange of ideas or elaboration based on scientific evidence. There is no listening. That happens a lot in politics. The mental training of a scientist is useful. The only way to counteract fake news is with critical thinking. That is how my training comes in.

Toni Feder