

COLUMBIA GLOBAL CENTERS | MUMBAI



ANNUAL REPORT 2017 - 2018

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Message from the President LEE C. BOLLINGER

Why does art provoke state censorship? How can pluralism be harnessed for positive political change? What role does religion play in protecting women from gender-based violence?

What role does religion play in protecting women from gender-based violence? Columbia's Global Centers are home to ongoing discussions of these and many other questions drawn from fields ranging from healthcare and sustainability, to social justice and armed conflict. These lectures and workshops, led by distinguished scholars from Columbia and other universities, are just one dimension of the rich intellectual life of the Global Centers. Our students are becoming proficient in foreign languages, and studying architecture and political science; researchers from diverse disciplines and backgrounds are collaborating to advance their scholarship.

As the world continues to change in ways that make us all feel more closely interconnected, and global society attains new levels of economic and technological integration, Columbia is evolving so that our scholarship and teaching reflect this reality. No enterprise at the University more fully embraces this future than our network of Columbia Global Centers. They are essential to expanding our understanding of the world and to preparing new generations to confront urgent problems that refuse to be cabined by national boundaries. The new perspectives that our faculty and students acquire in Columbia Global Centers stretching from Santiago to Beijing enrich the intellectual dialogue occurring on our New York campuses and bring all of us in closer contact with the rest of the world.

This is what we hoped for when we set forth to build Columbia Global Centers. With each passing year, we see a growing volume of innovative scholarship—in many instances, the product of collaborative programming involving multiple Centers. For this, we are indebted to you, our supporters, and to all of the remarkable faculty members and energetic students who are responsible, each in their own way, for creating this essential part of Columbia's future.

LEE C. BOLLINGER
President, Columbia University



Message from the Executive Vice President SAFWAN M. MASRI

This past academic year was a time of great global changes and challenges. The world experienced political upheavals, refugee crises, and contentious elections, the impacts of which were deeply felt by our Global Centers and our local, regional, and global partners. The acute and widespread effects of these events, however, reinforced that our network of Centers is uniquely positioned to take on the most pressing global issues of our time.

By responding to and engaging with our individual local contexts, the Columbia Global Centers have helped us better understand each other, and brought firsthand perspectives back to our campus in New York City.

Our network also experienced many important new developments during the year. We welcomed a new Director to our Nairobi Center, laid the foundation for a new Global Center in Tunis, and moved to a vibrant and elegant new space in Mumbai. Across our network, we deepened our connections with local audiences through education programs, research projects, and public engagement. Collectively, our network held over 350 events worldwide.

On campus, and under the visionary leadership of President Lee C. Bollinger, we beheld the awesome development of an entirely new 17-acre campus in Manhattanville, which will soon add the new University Forum building – a space where scholars and thought leaders from various fields can come together to share ideas. Columbia's priorities were also given a new voice through two groundbreaking global initiatives: Columbia World Projects, which will connect our research capacities with organizations beyond the academy to transform our work into concrete consequences benefitting humanity; and the Columbia Commitment, a five-year capital campaign organized around university-wide initiatives known as Commitments, which will support the work of faculty and students across schools as they collaborate for transformative impact on major issues of our time.

Our network of Global Centers has emerged over this past year stronger and more energized than ever before. Much of our success is due to the support of our partners, colleagues, and friends, and for that I say thank you. Looking to the future, we will continue to deliver impactful work on the ground in our nine cities and to bring important perspectives from around the world back to our growing campus in New York City.

SAFWAN M. MASRI

Executive Vice President for Global Centers and Global Development,

Columbia University



Reflections from the Director RAVINA AGGARWAL

From the world's highest mountains to fertile, dynamic rivers, from dense urban settlements to diverse cultures and religions, India offers a landscape of high complexity, rich innovation, and challenging scale.

Columbia Global Centers | Mumbai is a celebration of the endeavor to learn, deliberate, and act collaboratively across oceans, histories, and diverse trajectories of knowledge. To realize our mission of deepening the impact of academic knowledge and building strong global partnerships, we embarked on a course of action that was purposeful and expansive in scope. In its first five years, the Center had largely focused on facilitating two research projects for the Earth Institute and establishing the office in Mumbai. A strategic shift was initiated in 2015 through a process of intense consultation and analysis. As a result, by 2017, we had substantially overhauled programs even as research and pedagogy remained a core part of our activities.

In order to accommodate the demands of an exciting and productive knowledge hub, the Center moved into a new space in February 2017. Almost double in size as compared to our previous one, the new Center space is sea-facing, technically-equipped, and designed to be well-lit and flexible for diverse public programs and classes. A complete renovation of the space was initially challenging but it propelled our programmatic work to new heights, both in terms of volume of programs as well as quality.

We developed cluster programs in Mumbai and other areas of the country that consistently disseminated cutting-edge research to regional stakeholders in government, academia, the private sector, and civil society. A process of collaboration with Schools and Institutes at Columbia University culminated in two long-term projects involving public health and engineering. We supported student programs and held exhibits, workshops, and lectures to share knowledge and build capacity. Outreach through print and social media channelled greater attention to our programs and featured topics.

A lot has changed in the year and a half timeframe (January 2017-August 2018) that this Annual Report covers. We were fortunate to have a dedicated team, an amazing Advisory Board and Faculty Steering Committee, and the leadership of President Bollinger and Safwan Masri. Some individuals who deserve acknowledgment are Gita Johar, Upmanu Lall, Xin Peng, Ethan Phillips, Edward Silver, and Paul Hersh. We are hugely thankful to the donors who made our efforts possible during this period, especially Uday Kotak, Rajashree Birla, Sharad Sanghi, Pirojsha Godrej, Sudhanshu Vats, Vikram Pandit, Anne Kaplan, Dr. Yusuf Hamied, the Ford Foundation and the RMZ Foundation.

Thank you all for enabling us to aim for the peaks and flow along steadily in unpredictable waters.

RAVINA AGGARWAL

Director

Columbia Global Centers | Mumbai

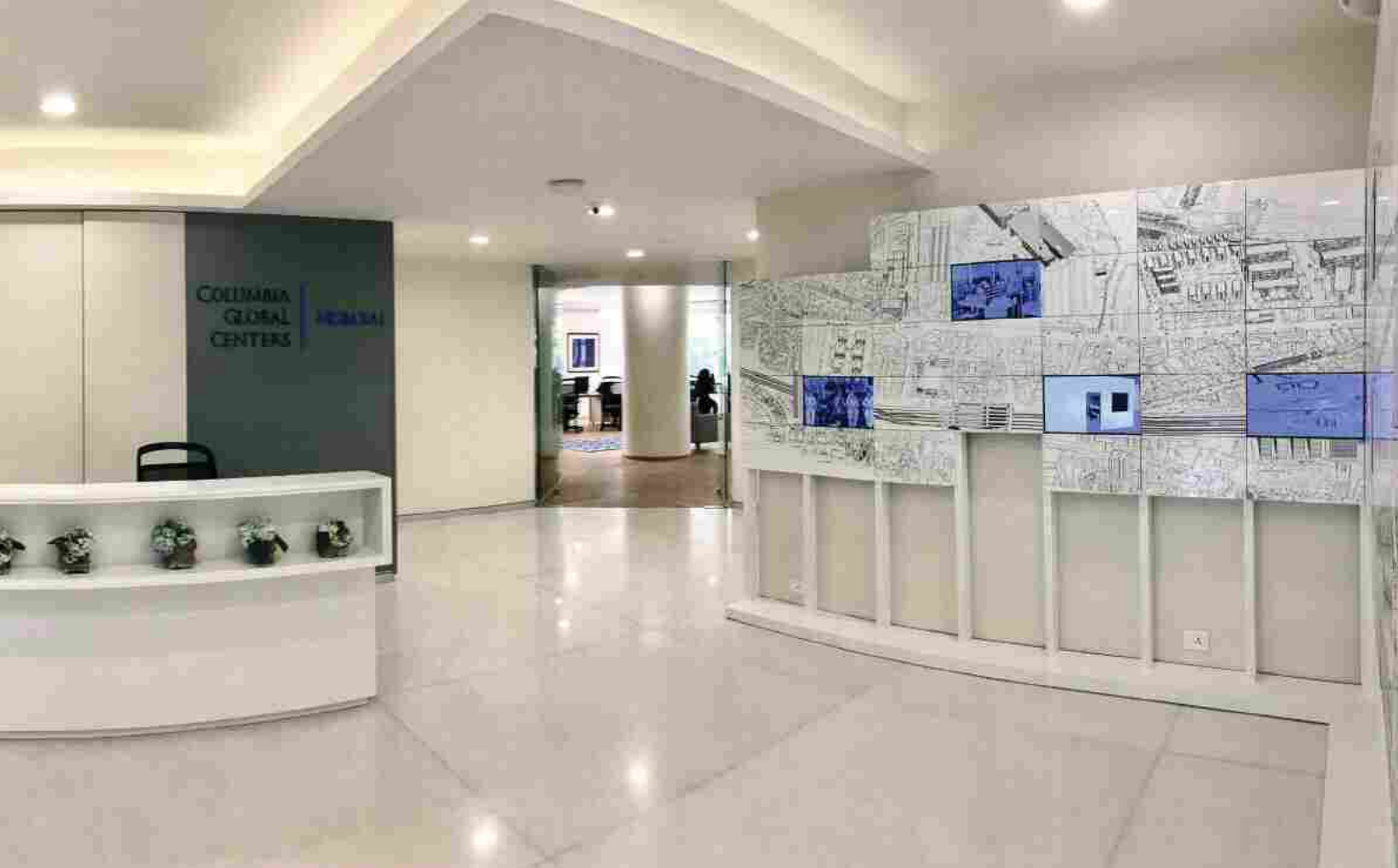
THE COLUMBIA GLOBAL CENTERS NETWORK

The Columbia Global Centers network promotes and facilitates the collaborative and impactful engagement of the University's faculty, students, and alumni with the world, to enhance understanding, address global challenges, and advance knowledge and its exchange. The global centers, as envisioned by President Lee C. Bollinger, were founded with the objective of connecting the local with the global to create opportunities for shared learning and to deepen the nature of global dialogue.

Under the leadership of Professor Safwan M. Masri, Executive Vice President for Global Centers and Global Development, there are nine Global Centers located in Amman, Beijing, Istanbul, Mumbai, Nairobi, Paris, Rio de Janeiro, Santiago and Tunis. This network forms the core of Columbia's global strategy, which is to expand the University's ability to contribute positively to the world by advancing research and producing new knowledge on the most important issues confronting our planet.

The Columbia Global Centers engage regional experts, scholars, universities, and civil society, while encouraging teaching and research across disciplinary boundaries. Some of the programs and research initiatives are country-specific, some regional, and an increasing number are multi-regional and even global. Columbia Global Centers are now well immersed in their local regions, and in a position to further leverage their partnerships and expertise on behalf of the Columbia community.





COLUMBIA GLOBAL CENTERS | MUMBAI

Columbia Global Centers | Mumbai was established in 2010 to serve as a research, education, and knowledge hub for promoting new and informed ways of addressing global challenges.

Columbia University and India have a longstanding relationship that has produced several influential thinkers and figures who have played an important role in India's democracy and economy. Columbia's faculty and alumni from the region have contributed to advancements in the arts, engineering, journalism, business, and medicine that have had a global impact

Building on this legacy, the Mumbai Center connects Columbia University's world-class scholars and students with peers from the South Asian region. It develops innovative and interdisciplinary research, designs educational opportunities for students, and disseminates research to wider publics in academia, government, civil society, and the private sector. Current programs focus around four thematic areas that have deep global and regional significance including environmental sustainability, education and culture, health and medicine, innovation and enterprise. The Center works to deepen knowledge, advance global learning, inform policy, expand networks, and innovate new solutions that can transform society.

WHAT WE DO

THEMATIC AREAS



ENVIRONMENTAL
SUSTAINABILITY



EDUCATION AND
CULTURE



HEALTH AND
MEDICINE



INNOVATION AND
ENTREPRENEURSHIP

ACTIVITIES

PUBLIC ENGAGEMENT

Dissemination of academic knowledge to relevant audiences through public lectures, panels, creative programs, policy workshops, training programs, and publications

RESEARCH PROJECTS

Development and management of impactful and interdisciplinary research projects in partnership with faculty at Columbia University and regional experts and institutions

STUDENT PROGRAMS

Opportunities for course-work, design studios, study tours, internships, and information sessions for strengthening Columbia University's global learning mission

STAKEHOLDERS

ACADEMIC
INSTITUTIONS
AND EXPERTS

CIVIL
SOCIETY

COLUMBIA
ALUMNI
COMMUNITY

GOVERNMENT
AGENCIES

PRIVATE
SECTOR

PROGRAMS IN FOCUS

January 2017 – August 2018



ENVIRONMENTAL SUSTAINABILITY

WATER ACCESS AND MANAGEMENT

As the largest consumer of groundwater, India is one of the most water-stressed countries in the world. It is dependent on groundwater for most of its drinking water supply and irrigated agriculture. Yet public knowledge about water conservation remains abysmally low.

Columbia Global Centers | Mumbai has built a sound reputation as a research-oriented knowledge hub for raising public awareness and promoting informed decision-making on sustainable water management. In 2017-18, the Center organized 15 interdisciplinary events across four cities to deepen research on water issues and make this knowledge more accessible to a wider public. Events focused on conserving water resources and increasing access to safe and clean water. They were informed by a robust body of research by Columbia faculty from disciplines as diverse as engineering, architecture, public health, geochemistry, and the social sciences.

The Mumbai Center launched a Groundwater Lecture Series that provided a global platform to leading scientists, researchers and practitioners for placing their research into the public domain. The series featured water experts from Columbia University on topics such as India's progress on the sixth Sustainable Development Goal related to water and sanitation, community water management, and geo-spatial mapping of water resources. The lectures were curated into online knowledge products in the form of videos and webinars for creative learning across the globe.

The Center successfully engaged over 1,540 Indian stakeholders in its knowledge programs, creating a diverse community of practice dedicated to water. Its messaging on judicious water use, better planning of water infrastructure, and the promotion of clean and safe drinking water was consistently covered in the mainstream media, ensuring dissemination to a wider audience.

As it gained more visibility for its work on water, the Center was invited by key policymaking institutions and water training institutes in India to undertake capacity-building programs for their hydrologists, administrators and water professionals and develop trainings on latest digital tools, interdisciplinary approaches, and planning frameworks.

KEY STATISTICS

- Over 15 interdisciplinary public programs (workshops, panel discussions, exhibitions, film screenings) focusing exclusively on water issues were organized across four cities
- Programs engaged over 26 academic institutions, including IIT Bombay, IIT Delhi, IIT Kanpur, Sir JJ College of Architecture, and Roorkee College of Engineering
- Apex government bodies, including the National Mission for Clean Ganga, Ministry of Water Resources, River Development and Ganga Rejuvenation LBSNAA, Mussoorie, and National Institute of Hydrology, Roorkee, participated in capacity-building programs
- Leading media publications such as The Hindu, The Times of India, Mid-day and the Mumbai Mirror, and popular online portals such as the India Water Portal and scroll.in covered the Center's programs on water





Mapping the River Ganga

In addition to lectures, panel discussions, policy workshops and webinars on water, the Columbia Global Centers I Mumbai designed a flagship program focused on the River Ganga to encourage new approaches for the planning and management of river basins. The Ganga is one of the most densely populated river basins in the world and home to almost one-third of India's people who rely on it for their lives and livelihoods. The river's fertile alluvial basin, although situated largely within India, also extends into Bangladesh, Nepal, and China. Its unique topography, scale, and challenges offer new perspectives on understanding rivers globally.

Generously supported by the Ford Foundation and the Aditya Birla Group, the Center organized a multi-media exhibition, *The River Ganga: India's Iconic Water Machine* with Anthony Acciavatti, Adjunct Assistant Professor, Graduate School of Architecture, Planning and Preservation, Columbia University, and Professor Upmanu Lall, Director of the Columbia Water Center. The exhibition drew upon Dr. Acciavatti's decade-long research and field materials to present a visual archive and the first systematic study and comprehensive mapping of the infrastructural transformation of the Ganga River Basin.

In Mumbai, the exhibition was inaugurated in August 2017 at the Nehru Science Centre by Rajashree Birla, Director, Aditya Birla Group of Companies and a greatly valued member of the Center's Advisory Board. It was subsequently co-hosted by the American Center New Delhi from and the National Institute of Hydrology in Roorkee in April 2018.

“The exhibition educates a large number of people about the gaps in our understanding of rivers. Management of the Ganga needs to be a multi-stakeholder effort, and I am happy to be a part of this endeavor.”

- Ms. Rajashree Birla, Director, Aditya Birla Group of Companies

The exhibition, designed to reflect the shape of a river, took visitors through a visual journey of the descent of the Ganga from the Gangotri glacier in Gaumukh. The maps illustrated the rhythmic shifts of the river and its tributaries based on the cyclical shifts of the monsoon, while transects and photographs showed the penetration of technology – canals, tubewells, and barrages – and how it has been used and abused to extract water for agriculture and drinking purposes.

The exhibition was complemented by a series of panel discussions, workshops and trainings that oriented participants to the environmental heritage of the Ganga, the conflicts of human and environmental ecosystems and climatic shifts in the river basin. To introduce the next generation of professionals to newer research methodologies and contemporary global debates on water management, the Center organized numerous guided walkthroughs and expert interactions. Leading academic institutions, including the Tata Institute of Social Sciences, SVKM's NMIMS School of Design, the Gateway School of Mumbai and Cathedral and John Connon School, participated. The objective was to reinforce the value of rigorous research and to inspire students to think beyond their taught curriculum. Many noted learning new things about the river including, for example, that it is has the world's longest canal.





EDUCATION AND CULTURE

MUMBAI: ARCHIVES OF A GLOBAL CITY

With a population of over 18 million, Mumbai is one of the densest urban areas in the world. It remains India's leading financial city and is globally recognized for its cultural industries. A vibrant and diverse civil society inhabits its social spaces that are shared as much as they are contested. Enabled by its location in the city, Columbia Global Centers | Mumbai initiated a dedicated series of programs to gain new perspectives on how the city's past affects its present and future. Showcasing innovative pedagogical and research methodologies for engaging with the city's cultural archives, programs provided insights into pathways for knowledge-sharing and educational opportunity.



Revisiting Dr. Ambedkar's Mumbai

Bhimrao Ramji Ambedkar is regarded as the architect of the Indian constitution, a global icon of human rights, and a social reformer leading the struggle against caste inequality. He earned two MA degrees from Columbia University between 1913 and 1916, a Ph.D. in Economics in 1927, and an honorary L.L.D. in 1952.

As a tribute to Dr. Ambedkar and the alumni community, Columbia Global Centers | Mumbai collaborated with the Kamla Raheja Vidyanidhi Institute for Architecture to create an installation (see photograph on page 9) that maps the story of Dr. Ambedkar's educational journey in Mumbai – as a student, a teacher, an activist for education rights, and founder of colleges, hostels, printing presses, educational societies, and libraries.

The conceptualization of the installation benefited from an online archive created by Professor Frances Pritchard and a workshop with Professor Anupama Rao that the Center had organized in December 2016. The workshop included Columbia faculty from Philosophy, English and Comparative Literature, and Indian intellectuals such as Professor Gopal Guru and Wandana Sonalkar who presented their work on the connection and comparison between black movements in New York and anti-caste thought in Mumbai.

The installation is a reminder for visitors at the Center of the power of education, of its role in overcoming extreme adversity, and of the need to nurture it by individuals and society at large.

“The best friends I have had in my life were some of my classmates at Columbia and my great professors.” - Dr. Ambedkar, *New York Times*, 1930



Technological Journeys into the Mill Lands

Perhaps no other space is as visually evocative of the city's fluidity and flux as the mill area, which became its financial and cultural lifeline beginning in the nineteenth century when the global demand for cotton brought enormous trade opportunities to its shores. In the last few decades, however, the path of redevelopment adopted by the city of Mumbai has led to a radical transformation of its built structures and social communities. As old forms of horizontal living and workers' colonies are replaced by new populations and real estate infrastructure, the contribution made by the mill workers and their families to the city is selectively remembered or erased entirely.

Columbia Global Centers | Mumbai partnered with HELM Studios to host an exhibition from November 20-25, 2017, on the erstwhile mill lands of Girangaon, documented through the eyes of the people who lived and worked there. The exhibition, which was based on the extensive archival work of Partners of Urban Knowledge and Action Research (PUKAR), used 360-degree multimedia production techniques, photography and video along with personal interviews, urban maps, and historical records. Montages illustrated the lives of the mill workers, who lived in one-room tenements called chawls.

The exhibition also offered glimpses into the culture, religion and art forms practiced and produced by the mill-worker community. One could choose to watch city experts speak about the rights of the mill workers, the future of real estate, or view the online archive through the several interactive stations interspersed through the exhibition. The inclusion of immersive virtual reality stations gave viewers an idea of how generations of mill workers and their families have lived in these neighbourhoods.

Nandita Das, film artist and social activist, inaugurated the exhibition. An opening panel followed, featuring Anita-Patil Deshmukh, Executive Director, PUKAR, Neera Adarkar, Urbanist and Graciela Montaldo, Professor, Department of Latin American and Iberian Cultures, Columbia University.

The Center organized several walkthroughs to acquaint student groups and Heritage Clubs with newer methods of archiving and presenting the city's past. Numerous visitors from academia, civil society groups, the media, and architectural firms came to view the exhibition.

“A most interesting way of recording events and very useful
to researchers”

- Romila Thapar, a renowned historian.





“To translate the syllabus into a viable learning experience needs on-site intellectual and logistical support. Having the support of the Center in Mumbai made everything possible.”

- Debashree Mukherjee,
Assistant Professor, MESAS

Tracing Film Practices in the City

The Mumbai film industry is among the oldest and largest in the world.

Columbia Global Centers | Mumbai provided a unique opportunity for students to immerse themselves in the city's historical and contemporary media practices so they could appreciate alternate images and diverse influences from non-Western cinema, and get a comparative perspective.

Partnering with the Beijing Center, the Office of Global Programs, and the Weatherhead Institute, the Mumbai Center launched an intensive six-week summer program on Media Practices, with students spending three weeks each in India and China. Led by Columbia University professors Debashree Mukherjee and Ying Qian, 12 undergraduate students at Columbia got an opportunity to pursue learning in real-world settings.

To create a balance between theoretical and practical learning, a curriculum was designed entailing daily lectures and readings, field visits, and master classes led by media practitioners that were open to local students and audiences.

Students were introduced to multiple sites to understand the city's film heritage. They interacted with eminent artists, including actor Konkona Sen Sharma; filmmakers Paromita Vohra, Anand Patwardhan and Opendar Chanana, learned about film archives and conservation from experts at the Film Heritage Foundation and Osian's, examined microfilm copies of historical newspapers such as The Bombay Chronicle at the Asiatic Library, and visited film sets, theaters, and exhibitions. “I've done a study abroad program before but that was taught entirely in the classroom. This program brought the outside in and took the classroom out into the city as well,” observed Alexander McNab, an undergraduate student who took the course.

HEALTH AND MEDICINE

STRENGTHENING PUBLIC HEALTH RESEARCH





“The Mailman School is honored to be able to launch the Yusuf Hamied Faculty Exchange Program in Health to support development of scientific collaboration with researchers in Indian schools of public health. This generous and visionary gift will escalate co-innovation and leadership on key emerging health challenges”

- Linda Fried, Dean of the Mailman School of Public Health

India faces new health challenges as cancers, diabetes, and cardiovascular, respiratory, and other non-communicable diseases are now estimated to account for 60% of all deaths. Even as the country has considerable expertise, some conducive policies, and systems, the rising cost of healthcare and the lack of universal health coverage remain key constraints.

In order to address these pressing concerns, the Columbia Global Centers | Mumbai categorically identified Health and Medicine as one of its priority areas.

Yusuf Hamied Fellowships

In 2018, the Mumbai Center and the Mailman School of Public Health received a generous gift from distinguished philanthropist, Dr. Yusuf Hamied, to advance science and improve public health outcomes for India by promoting mutual learning and collaboration.

To lay the groundwork for this five-year program, the Center hosted a roundtable discussion with Dean Linda Fried, Professor Lynn Freedman, and Professor Kavita Sivaramakrishnan from the Mailman School and leading public health experts from Mumbai. Representatives from the Department of Medical Education and Research, Haffkine Institute, KEM Hospital, Society for Nutrition, Education and Health Action, and Partners for Urban Knowledge, Action and Research participated in the event. The roundtable served as a valuable starting point for the new initiative. Participants helped identify emerging public health needs in India, discussed ways for them to be addressed, and plotted a path for forging global collaborations.

The program was then designed with a focus on Health and Environment, Access to Treatment, and Population and Family Health to provide fellowships for three research projects on India led by public health faculty at Columbia University and to three faculty members in Indian educational institutions for short-term residencies at the Mailman School annually.

Subsequently, the Mumbai Center completed a mapping of the most important public health institutions in India and forged strategic partnerships with three well-reputed public health institutions, including the Tata Institute of Social Sciences, the International Institute of Population Sciences, and the Public Health Foundation of India.

In order to bring research on health to relevant stakeholders, Columbia Global Centers | Mumbai launched a series of public programs incorporating influences of globalization, environmental change and demographic shifts that are affecting health systems in India. These events aimed to train the next generation of public health leaders and disseminate cutting-edge research in the field. The Center's events have successfully engaged over 175 specialists and other stakeholders in the health sector.



URBAN WORKS

INNOVATION CHALLENGE 2018



INNOVATION AND ENTREPRENEURSHIP

ENGINEERING FUTURE WORKPLACES

India has a young and growing population with a workforce estimated to touch 700 million by 2030. With global economic shifts, technological changes, and resource scarcity, a re-engineering of workplaces is critical not only to India's future economic success as it strives to attract and retain talent but also to the future of the global knowledge economy itself. *The Asia Workplace Survey 2016* conducted by Gensler, an American design and architecture firm, concluded that supporting innovation in Asian workplaces will require different approaches and designs than those being adopted by western counterparts, and that the time to move forward with these new approaches and designs is now.

To address the critical need of transforming 21st-century workspaces into environments that support innovation and productivity, Columbia Global Centers | Mumbai entered into an exciting partnership with the Fu Foundation School of Engineering and Applied Science (Columbia Engineering) to launch the Urban Works Innovation Challenge program in June 2018. This initiative has received generous support from the RMZ Foundation and the CoWrks Foundry. The CoWrks Foundry, based out of Bangalore, is a premier acceleration program for early stage businesses in the fields of Urban Tech, Enterprise Tech and Social Enterprise. Passionate student teams from Columbia and young professionals and startups from India are encouraged to use their vision to create products, solutions, and measures needed for their ideal workplace.

“Design challenges are a wonderful way to spur engineering creativity and foster cross-disciplinary collaboration”

- Mary C. Boyce, Dean of Columbia Engineering.

Joint planning for this challenge began with the November 2017 visit of Mary C. Boyce, Dean of Columbia Engineering. Speaking at Columbia Global Centers I Mumbai and at the Taj West End in Bengaluru Dean Boyce shared an overview of the strategic direction of the school, *Columbia Engineering for Humanity*. Embodying the five elements of Sustainability, Health, Security, Connectivity, and Creativity, the new vision reflects a strong commitment to both technical innovation and community impact.

Columbia Engineering has over 1,600 undergraduates and over 2,600 graduate students. The greatest percentage of Columbia alumni in India are graduates of this school.

Sharad Sanghi, an alumnus of Columbia Engineering and an Advisory Board member of the Mumbai Center, accepted the invitation to serve as an advisor to the Urban Works project. As Managing Director and CEO of Netmagic Solutions, he is committed to thinking of sustainable and energy efficient solutions in the data service industry. The challenge will benefit from the experience and advisory role of two other alumni, Pirojsha Godrej, Executive Chairman of Godrej Properties, and Shom Hinduja from the Hinduja Group.





“Partnership with Columbia brings together world-class mentorship and education, while paving way for innovation led by a modern and young workforce on a global stage.”

- Anu Menda, President of the RMZ Foundation

In August 2018, project co-directors, Patricia Culligan, Professor of Civil Engineering at Columbia, and Ivy Schulz, Director of Entrepreneurship at the School of Engineering, led seminars at the Mumbai Center and the beautifully designed CoWrks headquarters in Bengaluru to provide guidelines and provoke creative design-thinking among potential applicants. Incorporating research materials on the policies and practices of work environments prepared by the Mumbai Center’s team, Professor Culligan presented a framework for urban infrastructure challenges faced by stable, aging, shrinking, and growing cities such as Rajkot and Mumbai in India. She gave examples of innovations and products emerging from research and design activities at Columbia School of Engineering. Her presentation was followed by an interactive talk on innovation methodology and process Ivy Schultz.

The project exemplifies the opportunities for deepening the impact of research and teaching that are made possible by building strong partnerships between schools and global centers.

LIST OF PROGRAMS

January 2017 – August 2018

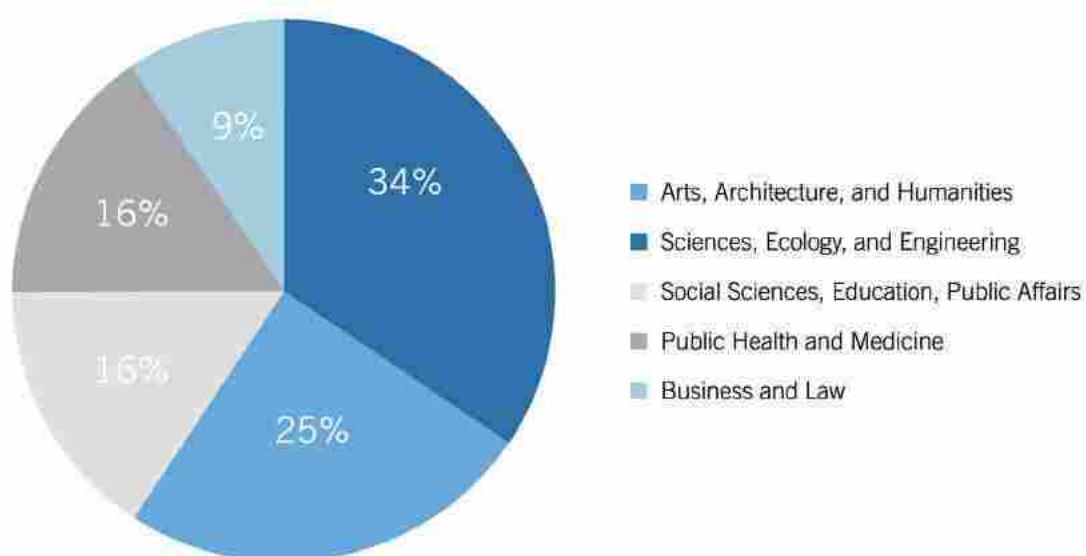
KEY STATISTICS

JANUARY 2017-AUGUST 2018

ENGAGEMENT WITH THE COLUMBIA COMMUNITY

FACULTY/DEANS	STUDENTS	ALUMNI
64	144	102

PERCENTAGE OF FACULTY ACROSS DISCIPLINES



PUBLIC ENGAGEMENT

Type of Organization	Organizations Represented	No. of Individuals
Academic Institutions	90	3200
Civil Society Organizations	95	
Government Agencies	34	
Private Sector Organizations	172	
TOTAL	391	

RESEARCH PROJECTS

The Mumbai Center develops, manages, and supports innovative and interdisciplinary research initiatives in partnership with faculty at Columbia University and regional experts and institutions through the President's Global Innovation Fund. The latter fund, launched in 2013, provides support for faculty for the development of projects and research collaborations with the Columbia Global Centers. Research projects awarded for partnering with the Mumbai Center during 2017-2018 include:

STORM SURGE RISK TO MUMBAI: A CHALLENGE TO SUSTAINABLE URBANIZATION IN INDIA'S LARGEST CITY

Principal Investigator: Adam Sobel

Description: The primary research activities this grant were modeling of tropical cyclone and storm surge risk to Mumbai. Our key result from this research is that a major tropical cyclone landfall and attendant high storm surge in Mumbai is possible. It would be a rare event – perhaps one in 200-1000 years -- depending on the model used, but certainly within the realm of possibility, and comparable to the risk of an event comparable to Sandy in New York City. The goal of this research was to inform the city, state, and central governments to take the risk of cyclone landfall and storm surge more seriously and develop better emergency management plans for it.

GENERATIVITY IN DEPRIVED URBAN CONTEXTS; OLDER ADULTS' EXPERIENCES IN SLUMS IN MUMBAI, NAIROBI, AND AMONG HAITIAN IMMIGRANTS IN NEW YORK

Principal Investigator: Kavita Sivaramakrishnan

Description: Societies around the world are growing older rapidly. There is evidence from research that older adults, if they have the requisite capacity and opportunities, will engage with, and seek to support, younger generations and that such engagement will enhance capabilities of the young and well-being of the old. This project interrogates the notion of 'generativity' in low-income neighbourhood in Mumbai, New York, and Nairobi to focus scholarly attention on knowledge production on aging and also contribute to framing new categories and protocols for testing theories and practices in the global South.

TOWARDS EARLY DETECTION AND FORECASTING OF HYPOXIC EVENTS, HARMFUL ALGAL BLOOM OUTBREAKS AND FISH MORTALITY EVENTS ALONG THE WEST COAST OF INDIA

Principle Investigators: Joaquim Ignacio Goes and Helga Rosario Goes

Description: The Arabian Sea is currently experiencing one of the most dramatic and extreme of changes observed in any of the planet's ecosystems. Driven by global warming related monsoonal changes and anthropogenic loadings from the several megacities along its large coastline, the base of its food change is transitioning in a way that potentially destabilizes the food chain on which millions of people from populous countries like India, Oman, Iran, Yemen and Pakistan depend. The project seeks to predict these events in Western India for better long-term management of coastal resources using high frequency ecological studies and a web-based Decision Support tool.

FOSTERING INTERNATIONAL NETWORKS AND MULTIDISCIPLINARY RESEARCH TO PROMOTE AN UNDERSTANDING OF THE HEALTH EFFECTS OF BIOMASS EXPOSURE

Principle Investigator: Jeanine D'Armiento

Description: This project explores educational exchange, collaboration and training between faculty of Columbia University and scholars from CSIR-Institute of Genomics and Integrative Biology, New Delhi, with a focus on the ill effects of biomass exposure on health. Initial studies will focus on the direct effects of biomass on the lung with expectation to expand into the effects on cardiovascular disease and pediatric illnesses.

STUDENT PROGRAMS

The Mumbai Center promotes knowledge exchange through a set of academic programs and internships to enable students to immerse themselves in the culture and life of India, learn with regional experts and peers, and gain a practical insight into the global. We offer opportunities for strengthening Columbia University's global learning mission through courses, studios and field trips, internships, and graduate student placement opportunities. Student programs in 2017-18 included:

[SUMMER COURSE IN ASIAN MEDIA PERSPECTIVES](#)

In order to create a unique opportunity for undergraduate students to study and appreciate cinema industries in India and China, the Mumbai and Beijing Centers organized a six-week summer program on Media Practices in India and China in May 2017. Through immersive excursions and in-class curriculum, the program facilitated students' deeper learning and appreciation of the diverse influences, histories, and transformations of these mammoth media industries.

[KRAFT GLOBAL FELLOWS LEARN ABOUT RELIGIOUS PLURALISM IN INDIA](#)

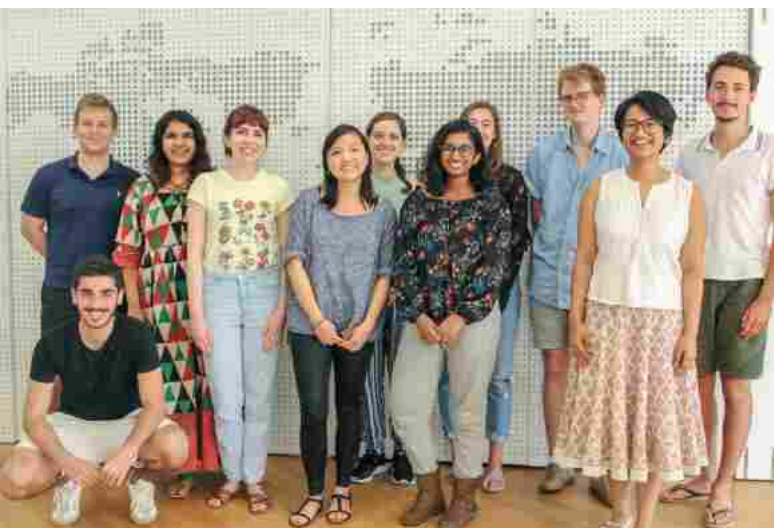
A cohort of Kraft Global Fellows, led by Columbia University Chaplain, Jewelnel Davis, traveled to India in January 2017 for an intensive field study on Religious Pluralism. The fellows visited Mumbai and New Delhi where the Center had organized visits to prominent sacred sites, curated walks, and interactions with academic experts and religious leaders to learn about the history and practices of different religions in India.

[COLUMBIA EXPERIENCE OVERSEAS \(CEO\) AND MAILMAN PUBLIC HEALTH INTERNSHIPS](#)

Over the summer, graduate and undergraduate Columbia students visit the Center through two longstanding internship programs, the CEO Program with the Columbia University Center for Career Education and the Public Health Practicum with the Mailman School of Public Health. These internships place students in various leading for-profit and non-profit organizations in different industry sectors such as medicine, education, health, banking and journalism in Mumbai.

[RECEPTION AND SEND-OFF FOR NEWLY ADMITTED COLUMBIA STUDENTS](#)

In association with the Columbia Alumni Association of India, the Center organizes and hosts receptions and send-offs for newly admitted graduate and undergraduate students to Columbia University. Students get the opportunity to learn more about the Columbia experience and life in New York through interactions with alumni and network with many of their new peers for the first time.





PUBLIC PROGRAMS

January 19, 2017 | Lecture and Panel Discussion

Culture, Creativity, and the Innovation Imperative

Gita Johar

Professor, Columbia Business School

Panelist: Aparna Pirmal-Raje, Writer and Author

March 10-14, 2017 | Public Lecture

A Panorama of Latin American Cinema

Richard Pena

Professor of Professional Practice, School of the Arts, Columbia University

Co-Organizer: Bhau Daji Lad Museum

April 12, 2017 | Public Lecture, *Groundwater Series*

Toilet to Tap: Greywater Recycling for Mumbai

Rakesh Kumar

Director, Council of Scientific and Industrial Research-National Environmental Engineering Research Institute, Government of India

April 17, 2017 | Public Lecture

Managing the Waste of Nations: A Global Analysis

Athanasios Boursalas

Adjunct Professor, Earth and Environmental Engineering, Columbia University

April 24, 2017 | Webinar

Globalization and the Indian Experience

Manjeet Kriplani, Founder, Gateway House

Lakshmi Lingam, Tata Institute of Social Sciences

Govindraj Ethiraj, IndiaSpend

Co-organizer: Committee on Global Thought, Columbia University

May 8, 2017 | Public Lecture

Mangroves Through the Eye of a Satellite

Pinkie Mondal

Senior Research Associate, Earth Institute, Columbia University

May 23, 2017 | Masterclass, *Mumbai as a City of Knowledge Series*

A Life in Films

Konkona Sensharma, Actor and Director

Debashree Mukherjee

Assistant Professor, Department of Middle Eastern, South Asian and African Studies, Columbia University

June 5, 2017 | Public Lecture

Visionary Realities: A Brief History of Documentary Cinema in China

Ying Qian

Assistant Professor, Department of East Asian Languages and Cultures, Columbia University

June 23, 2017 | Roundtable

C40 Cities: Establishing Mumbai as a Leader of the Megacities of the World

Sanjay Sridhar

Regional Director, South and West Asia, C40 Cities Climate Leadership Group

June 30, 2017 | Public Lecture, *Groundwater Series*

Demystifying Science, Making Groundwater Accessible in India

Himanshu Kulkarni

Founder Trustee and Executive Director, Advanced Center for Water Resources Development and Management

July 27, 2017 | Public Lecture

Immigration and its Discontents: International Migration After

Brexit, Brussels, and Trump

Neeraj Kaushal

Professor, School of Social Work, Columbia University

August 18-27, 2017 | Exhibition

The River Ganga: India's Iconic Water Machine

Venue: Nehru Science Center

August 20, 2017 | Film Screening and Discussion, *Groundwater Series*

Agony of the Ganges: A Film

Q and A: Sudhesh Unniraman, Filmmaker

Venue: Nehru Science Center

August 22, 2017 | Panel Discussion, *Groundwater Series*

Rivers of the Future: Evolving Approaches to Integrated Water Management

Panelists: Madhav Chitale

Former Member, National Ganga River Basin Authority

Roshni Udyavar Yehuda

Head, Rachna Sansad Institute of Environmental Architecture

Anthony Acciavatti

Graduate School of Art, Architecture and Planning, Columbia University

Venue: Nehru Science Centre, Mumbai

August 23, 2017 | Webinar

When River Becomes Machine

Anthony Acciavatti,

Graduate School of Art, Architecture and Planning, Columbia University

Vinod Tare

Centre for Ganga River Basin Management and Studies,

Indian Institute of Technology-Kanpur

October 4, 2017 | Public Lecture and Discussion, *Groundwater Series*

Reviving Urban Lakes: Smart Pathways for Cities

Veena Srinivasan

Fellow, Ashoka Trust for Research in Ecology and the Environment

Discussant: Urjit A. Yajnik

Professor of Physics, Indian Institute of Technology-Bombay

November 3, 2017 | Roundtable

New Philanthropy in India

President Lee Bollinger

Executive Vice President Safwan Masri

Heads of leading philanthropic institutions in India

November 17, 2017 | Public Lecture

Engineering for Humanity

Mary C. Boyce

Dean, Fu Foundation School of Engineering and Applied Science, Columbia University

November 20-25, 2017 | Exhibition

Archiving the Mill Lands: The Mythologies of Mumbai Project

Partners: Partners of Urban Knowledge and Action Research (PUKAR), HELM Studios

November 20, 2017 Panel Discussion, *Mumbai as a City of Knowledge Series*

Opening Panel for 'Archiving the Mill Lands'

Anita Patil-Deshmukh, Executive Director, PUKAR

Neera Adarkar, Urbanist and Author

Graciela Montaldo

Professor, Department of Latin American and Iberian Cultures, Columbia University

November 27, 2017 | Panel Discussion

Women in Leadership: Challenges and Way Forward

Ravina Aggarwal, Director, Columbia Global Centers I Mumbai

Anumita Roy Chowdhury, Executive Director, Centre for Science and Environment

Vaishali Nigam Sinha, Director, ReNew Power; Founder and CEO, iCharity

Organizer: Columbia Alumni Association of India

Venue: India Habitat Centre, New Delhi

December 12, 2017 | Public Lecture

New York after Hurricane Sandy and the Future of Urban Floods

Adam Sobel

Professor, Department of Applied Physics and Applied Mathematics of Earth and Environmental Sciences, Columbia University

January 10, 2018 | Roundtable

Implications of Changing Public Health Challenges and the Solutions Needed

Linda Fried
Dean, Mailman School of Public Health and Senior Vice President, Columbia University Medical Center
Lynn Freedman
Professor, Population and Family Health, Columbia University Medical Center
Kavita Sivaramakrishnan,
Assistant Professor, Sociomedical Sciences, Mailman School of Public Health, Columbia University
Dr. Yusuf Hamied, Chairman, CIPLA Limited
Representatives from: Department of Medical Education and Research, Government of Maharashtra
Haffkine Institute, KEM Hospital, Society for Nutrition, Education and Health Action, PUKAR

January 11, 2018 | Public Lecture

Nurturing Children with Cancer: An International Initiative on Nutrition and Pediatric Oncology

Elena Ladas
Associate Professor, Columbia University Medical Center

January 15, 2018 | Panel Discussion

Enlightened Opportunity: Renewable Energy and Climate Policy in India

Patrick Bolton, Professor, Columbia Business School
Geoffrey M. Heal, Professor, Columbia Business School
Jairam Ramesh, Member of Parliament, Government of India
Anil Sardana, CEO and Managing Director, Tata Power
Suvojoy Sengupta, Partner, McKinsey & Company
Partners: Chanzen Institute, Columbia University
Eruditis Executive Education
Venue: Trident Hotel, Mumbai

January 19, 2018 | Workshop, *Groundwater Series*

Scaling Up Access to Safe Drinking Water in Rural India With Incentives

Alexander Van Geen
Professor, Lamont-Doherty Earth Observatory, Columbia University
Prabhat Barnwal
Assistant Professor, Department of Economics, Michigan State University, USA, Columbia University alumnus

February 9, 2018 | Discussion, *Groundwater Series*

Water Philanthropy in India

Rohini Nilekani
Founder-Chairperson, Arghyam

February 12, 2018 | Workshop

Evidence-Based Approaches for Enhancing Educational Quality

Madhabi Chatterji
Professor, Teachers College, Columbia University

March 6, 2018 | Workshop

Shots Felt Around the World: Cinema as Catalyst for Social Action

Richard Pena
Professor of Professional Practice, School of the Arts, Columbia University

March 7, 2018 | Public Lecture and Discussion

Women Directors in Film: Ida Lupino

Richard Pena
Professor of Professional Practice, School of the Arts, Columbia University
Discussant: Alankrita Shrivastava, Filmmaker

March 16, 2018 | Workshop

A Model International Mobility Convention: Rights and Governance for Migrants and Refugees

Daniel Naujoks
Adjunct Associate Professor of International and Public Affairs, School of International and Public Affairs, Columbia University

April 19-21, 2018 | Exhibition

The River Ganga, India's Iconic Water Machine

Venue: The American Center, New Delhi

April 20, 2018 | Workshop

Data Visualization for Environmental Change

Anthony Acciavatti
Graduate School of Art, Architecture and Planning, Columbia University
Venue: The American Center, New Delhi

April 25-26, 2018 | Exhibition

The River Ganga, India's Iconic Water Machine

Venue: National Institute of Hydrology, Roorkee

May 3, 2018 | Training Workshop

New Approaches in Integrated River Management: A Case of the Ganga River Basin

Anthony Acciavatti
Graduate School of Art, Architecture and Planning, Columbia University
Venue: Lal Bahadur Shastri National Academy of Administration, Mussoorie

May 16, 2018 | Public Lecture, *Mumbai as a City of Knowledge Series*

Researching the Mumbai Film Industry: The Value of Surprise

Tejaswini Ganti
Associate Professor, Department of Anthropology, New York University

May 29, 2018 | Public Lecture

Air Pollution and India's Burden of Public Health

Alexandra Karambelas
Postdoctoral Research Fellow, Earth Institute, Columbia University

July 4, 2018 | Public Lecture, *Mumbai as a City of Knowledge Series*

Translating Mumbai

Jerry Pinto
Writer, Author and Journalist

July 25, 2018 | Public Lecture

Water and Sanitation for All: Tracking India's Progress

Zachary Burt
Postdoctoral Research Fellow, Mailman School of Public Health, Columbia University

August 9, 2018 | Public Lecture

Theosophy as Cultural Translation

Gauri Viswanathan
Professor, Department of English and Comparative Literature, Columbia University

August 16, 2018 | Seminar, *Urban Works Innovation Challenge*
A Workshop on Urban Workspace Design and Sustainable Innovations

Patricia Culligan
Professor, Fu Foundation School of Engineering and Applied Science, Columbia University
Ivy Schulz
Director of Entrepreneurship, The Fu Foundation Engineering and Applied Science, Columbia University
Partner: RMZ Foundation, CoWrks Foundry
Venue: CoWrks Foundry, Bengaluru

August 17, 2018 | Seminar, *Urban Works Innovation Challenge*
A Workshop on Urban Workspace Design and Sustainable Innovations

Patricia Culligan
Professor, Fu Foundation School of Engineering and Applied Science, Columbia University
Ivy Schulz
Director of Entrepreneurship, Fu Foundation Engineering and Applied Science, Columbia University

August 24, 2018 | Discussion, *Mumbai as a City of Knowledge Series*

City Stars, Global Journeys

Aseem Chhabra,
Journalist and Author, Columbia Journalism School Alumnus



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Chase Manhattan Bank Professor of Economics and Finance, Columbia Business School



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EXECUTIVE ASSISTANT: SHAMA KAMAT

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*TEAM MEMBERS FOR 2017-18 INCLUDED MADHAVI RAJADHYAKSHA,
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