

# DESIGNING FOR LIFE AND DEATH

**Sustainable Disposition and  
Spaces of Remembrance in  
the 21st Century Metropolis**

Friday, April 1, 2016

9AM — 5PM

Colloquium at Columbia University

Low Library Faculty Room

**GSAPP** THE EARTH INSTITUTE  
COLUMBIA UNIVERSITY IRCPL

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# DESIGNING FOR LIFE AND DEATH

## **Imperative**

What we do with the physical and incorporeal remains of our dead reflects the character of the living. The depletion of urban cemetery spaces and the unsustainable burden that current burial and cremation practices exert on our environment necessitate alternatives for the disposition of human remains. Ecologically positive funerary and disposition practices are called for to complement new spaces of remembrance, responding to population diversity and enhancing both urban public space and cultural life.

## **Objectives**

1. To present and discuss feasible solutions to a) the scarcity of cemetery space, b) resource consumption, soil and air pollution, and c) the changing role of faith and diverse needs for memorialization among 21st century urban residents.
2. To engage relevant stakeholders in a productive dialogue about the opportunities and challenges of realizing innovative solutions to the disposition of human remains and the design of respectful, public spaces of remembrance. New York City serves as a case for addressing these issues in the US and globally.

- 9:00 **Registration**
- 9:30 **Welcome**  
Christina Staudt  
Columbia University Seminar on Death
- 9:35 **Introductory Remarks**  
Robert Pollack  
Columbia University Seminars
- 9:45 **Why What We Do with Our Dead Matters**  
Karla Rothstein  
DeathLAB, Graduate School of Architecture, Planning and Preservation (GSAPP), Columbia University
- 9:55 **How Death is Situated in 21<sup>st</sup> Century Urban Life**  
David Sloane  
Sol Price School of Public Policy, University of Southern California
- 10:15 **What is going on Elsewhere — Global Cities Overview**  
Ruth Toulson  
Humanistic Studies, Maryland Institute College of Art
- 10:35 **Science of Alternative Corpse Disposition**  
Kartik Chandran  
Department of Earth and Environmental Engineering, Columbia University  
Jennifer Preston  
Committee on the Environment, American Institute of Architects (AIA)
- Comments / Questions
- 11:10 COFFEE BREAK
- 11:25 **Legal and Regulatory Challenges of Disposition Methods**  
Tanya Marsh  
School of Law, Wake Forest University
- 11:45 **Vision for Change: Urban Spaces of Remembrance**  
Architectural Designers  
DeathLAB, GSAPP
- Comments / Questions
- 12:30 LUNCH  
Low Library Rotunda
- 1:30 **Stakeholders' Perspective — Funeral Services and Spiritual Care**  
Jason Bradshaw Bradshaw Funeral Home  
Amy Cunningham Fitting Tribute Funeral Services  
Rev. Eric Hall HealthCare Chaplaincy Network  
Richard Moylan Green-Wood Cemetery  
Jevon Truesdale Qico  
FACILITATOR: Bruce Jennings  
Center for Biomedical Ethics and Society,  
Vanderbilt University
- Comments / Questions
- 2:15 **Stakeholders' Perspective — Civic Life**  
Jennifer Preston Committee on the Environment, AIA NYC  
Mary Rowe  
The Municipal Art Society of New York (formerly)  
Mark C. Taylor Department of Religion, Columbia University  
Clara Irazábal Zurita Latin Lab GSAPP, Columbia University  
FACILITATOR: Adam Forman Center for an Urban Future
- Comments / Questions
- 3:00 COFFEE BREAK
- 3:15 **Accomplishing Sustainable, Innovative Urban Change**  
Brad Lander District 39, New York City Council  
Tanya Marsh School of Law, Wake Forest University  
James S. Russell  
New York City Department of Design and Construction  
Alice Shay Urban Planning, Bloomberg Associates  
FACILITATOR: Jesse Keenan  
Center for Urban Real Estate, GSAPP,  
Columbia University
- 4:00 **Round Table Discussion / Strategizing Next Steps**  
All Panel facilitators  
FACILITATOR: Mark C. Taylor  
Department of Religion, Columbia University
- 4:30 WINE RECEPTION

“Designing for Life and Death” is made possible by the support of Columbia University

Columbia University Seminars  
Graduate School of Architecture, Planning and Preservation  
The Earth Institute  
Institute for Religion, Culture, and Public Life

## Speakers

**Jason Bradshaw** serves as the vice president and chief operating officer of the Bradshaw Group, one of only a few funeral organizations in the country that offer alkaline hydrolysis, or green cremation. With a background in Biology, Bradshaw has been responsible for the company's bio-cremation project since 2010. Such disposal process produces fewer pollutants than traditional cremation, making it a leading innovation in transforming the funeral industry recognized by *Time* magazine in 2013.

**Kartik Chandran** is an environmental engineer and Professor in the Department of Earth and Environmental Engineering, Columbia University. The focus of his research is on elucidating the molecular microbial ecology and metabolic pathways of the microbial nitrogen cycle. Applications of his work have ranged from energy and resource efficient treatment of nitrogen-containing wastewater streams, development and implementation of sustainable approaches to sanitation to novel models for resource recovery. In 2015, Chandran received the MacArthur Fellowship for his innovative work that integrates microbial ecology, molecular biology, and engineering to transform wastewater from a pollutant to a valuable resource.

**Amy Cunningham** is a New York-licensed funeral director specializing in green burial, home funerals, and personalized cremation services at Green-Wood Cemetery's crematory chapels in Brooklyn. In 2015, she was listed as one of the "Nine Most Innovative Funeral Professionals" in the country by FuneralOne, a leading voice for change in the funeral industry. Cunningham received her mortuary training from American Academy McAllister Institute of Funeral Service and has a BA in English Literature from the University of Virginia. She lectures on funeral planning and the greening of the funeral business at the Park Slope Food Coop and keeps an informative blog, *The Inspired Funeral*.

**Adam Forman** is a Senior Researcher at the New York-based think tank, Center for an Urban Future, where he has authored several reports on topics ranging from the arts economy to city infrastructure. His editorials have appeared in local and national media outlets including *TIME*, *The Guardian*, *New York Daily News*, *New York Post*, *Gotham Gazette*, *City Limits*, and *Next City*. He was recently recognized by *City & State* as a "40 Under 40 Rising Star" in New York City politics. Trained in Economics and Political Science, Forman has previously worked at the NYC Public Advocate's Office, in tax and trade consulting, and as a freelance writer.

**Eric J. Hall** is president and CEO of HealthCare Chaplaincy Network, a global nonprofit organization whose mission is to advance the integration of spiritual support in health care. Under his leadership, the organization provides professional chaplaincy services to individuals and their families throughout the health care continuum at major hospital systems in New York. It also offers technology-driven outpatient chaplaincy and is advancing the field through myriad education and research initiatives. Hall serves as the minister of Eastchester Community Church in Eastchester, New York, and is managing partner of Alzheimer's Care Specialists, LLC. He was founder, president, and CEO of the Alzheimer's Foundation of America.

**Clara Irazábal** is Director of Latin Lab and Associate Professor of Urban Planning at the Graduate School of Architecture, Planning and Preservation, Columbia University. Her scholarship focuses on the role of urban planning in community emancipation, motivated by a concern for understanding social justice struggles manifested in the transformation of urban space. She is exploring the paradoxical negative impact of urban planning processes on markers of "marginal" identity — gender, ethnicity, race, sexual orientation, etc. — and their intersections with one another. Irazábal has worked as consultant, researcher, and professor in Venezuela, Brazil, Colombia, Mexico, Chile, Costa Rica, Trinidad and Tobago, Germany, Spain, Vietnam, and the US.

**Bruce Jennings** is Director of Bioethics at the Center for Humans and Nature, Vanderbilt University, where he is also the editor of the Center's electronic journal, *Minding Nature*. He serves as a Senior Advisor and Fellow and was Executive Director, from 1991 to 1999, at the Hastings Center, a bioethics research institute. In addition to serving as member and Chair of the Ethics Advisory Committee at the Centers for Disease Control and Prevention, he has been a member of the boards of directors of several scholarly and professional organizations, such as the National Hospice and Palliative Care Organization and the Hospice and Palliative Care Association of New York State.

**Jesse M. Keenan** leads the field of adaptation in the built environment as Research Director for the Center for Urban Real Estate at Columbia University. Working with cities, firms and governments from across the globe, Keenan currently directs research across a variety of scales from building technologies to regional planning practices. Keenan is presently the Associate Editor of the *International Journal of Climate Change Strategies and Management* and Vice-Chair of the U.S. Resilience Panel for Buildings and Infrastructure under the White House's Climate Action Plan, where he is leading a national dialogue on climate change and multi-hazard risks in the built environment.

**Brad Lander** is a New York City Council Member representing Brooklyn's 39th District. Elected to the City Council in 2009, and reelected in 2013, Lander is committed to issues of affordable housing, livable communities, the environment, and public education. He serves as the Council's Deputy Leader for Policy, and chairs the Committee on Rules, Privileges and Elections. Prior to serving in the City Council, Lander directed the Pratt Center for Community Development and the Fifth Avenue Committee. He is a founding board member of Local Progress, a new national network of municipal elected officials, and is on the boards of Democratic Municipal Officials and Smart Growth America's Local Leaders Council.

**Tanya D. Marsh** is Professor of Law at Wake Forest University. A graduate of Indiana University and Harvard Law School, Marsh is a licensed attorney in Indiana and a licensed funeral director in California. She developed and teaches the first and only law school course on funeral and cemetery law. She is the author of the first treatise in the area since 1950 — *The Law of Human Remains* (2015) and co-author of the only casebook, *Cemetery Law: The Common Law of Burying Places* (2015). An Associate Reporter for the Restatement (Fourth) of Property, Marsh has been elected to the American College of Real Estate Lawyers.

**Richard J. Moylan** began his career at Green-Wood Cemetery, a National Historic Landmark in Brooklyn founded in 1838, as a teenage landscaper in 1972. Serving as President for over 30 years, he manages all operations, including burials, cremations, capital improvements, regulatory matters and maintenance of its 478 acres. As burial space decreases, Moylan has transformed the cemetery into a visitor destination, creating tours, exhibitions and cultural events that draw on its history and beauty. With a background in Law from the New York Law School, he has invested significant resources into the preservation of Green-Wood's sculptures, monuments, architecture, and archive collections.

**Robert Pollack** is Professor of Biological Sciences at Columbia University, focusing on the relationship between science and subjectivity. His many engagements in the university have included faculty of the Earth Institute, lecturer in psychiatry at the Center for Psychoanalytic Training and Research, and adjunct professor of science and religion at Union Theological Seminary. Currently he is Director of University Seminars, and Director of the Research Cluster on Science and Subjectivity. He has received the Alexander Hamilton Medal from Columbia University and held a Guggenheim Fellowship. He is the author of many essays and books, such as *The Course of Nature* (with Amy Pollack, 2015), *The Faith of Biology and the Biology of Faith* (2000), and *The Missing Moment* (1999).

**Jennifer Preston** leads the development of sustainable architectural solutions fostering environmental wellness. As Sustainable Design Director at BKSK Architects her priority is a cooperative process. She integrates research with practice, attending to everything from building science, design simulation, and beauty. As research director with Columbia University's DeathLAB, she explores the transformation of memory and rhythm into vibrant public spaces. Preston serves on the Steering Committee for the AIANY Committee on the Environment (COTE), and she co-founded the NYC+NJ Living Future Collaborative, where she facilitates a thoughtful, slow and productive group of cooperative agitators.

**Karla Rothstein** is an architect who teaches at the Graduate School of Architecture, Planning and Preservation, Columbia University. She is a member of the Columbia University Seminar on Death and the founder and director of the trans-disciplinary DeathLAB. Rothstein is also Design Director at LATENT Productions, the architecture, research, and development firm she co-founded with Salvatore Perry. Her areas of inquiry span the intimate spaces of urban life, death and memory, to intersections of social justice and infrastructure. Through her work Rothstein aims to redefine urban spaces of death and remembrance, securing civic space for the future metropolis.

**Mary Rowe** is the former Executive Vice President of the Municipal Art Society, a century-old advocacy organization promoting the livability and resilience of New York City and the region. She lead MAS programming and advocacy work for effective urban planning, land use and urban design, and cultural development. Previously she spent five years learning about granular approaches to urban innovation while supporting the New Orleans Institute for Resilience and Innovation after Hurricane Katrina in 2005. Rowe has a particular interest in self-organization in cities, as the underpinning of urban social, economic, cultural, and environmental resilience, and is a contributor to several publications on urban life.

**James S. Russell** is recently appointed Director, Strategic Design Initiatives at the New York City Department of Design and Construction. He led a team that produced guiding principles covering equity, sustainability, resilience and healthy living for the agency. A long-time architecture journalist and critic, he was the architecture critic at *Bloomberg News* for nine years and a managing senior editor at *Architectural Record* magazine. His book *The Agile City: Building Well Being and Wealth in an Era of Climate Change* was published in 2012. He has taught at the City College of New York and at Columbia University, and is a fellow of the American Institute of Architects.

**Alice Shay** is a city planner and urban designer with the Bloomberg Associates Urban Planning practice led by Principal Amanda Burden. She contributes to the team's strategic planning and public realm projects, including urban design, public space planning, and land use instruments. Working with both government agencies and private stakeholders, she has developed projects in cities around the world. Shay has participated at the Bi-City Biennale of Urbanism/Architecture in Hong Kong in 2013, conducted research in residence at the Strelka Institute in Moscow in 2012, and has consulted on public realm strategies in London. Currently she is a Fellow of the Urban Design Forum.

**David Sloane** teaches at the Sol Price School of Public Policy, University of Southern California and has researched topics related to death and commemoration. He authored *The Last Great Necessity: Cemeteries in American History* (1991), a critical text in the development of cemetery studies. Currently he is completing a book on the past, present and future of the cemetery in the context of alternative commemorative techniques and disposition processes, including roadside shrines and natural burial ground. He has served on the board of advisors to the *Journal of the American Planning Association* and as a director of the Vernacular Architecture Forum.

**Christina Staudt** is Chair of Columbia University Seminar on Death and co-founder and president of Westchester End-of-Life Coalition. Her board and advisory positions include Jansen Hospice & Palliative Care, Cancer Support Team, and Columbia University GSAPP's DeathLAB. An art historian by training, her current scholarly interests center on the interplay of death and community. She co-edited and contributed chapters to *Our Changing Journey to the End: Reshaping Death, Dying, and Grief in America* (2014), *Unequal Before Death* (2012), and *The Many Ways We Talk About Death in Contemporary Society* (2009). A hospice volunteer since 1998, she offers support to the dying and their families.

**Mark C. Taylor** is a philosopher of religion, cultural critic, and professor at Columbia University. The subjects of his writing range from visual arts to nanotechnology, with recent books such as *Speed Limits* (2014), *Recovering Place* (2014), *Rewiring the Real* (2013), and *Refiguring the Spiritual* (2012). In addition to his writings, Taylor has produced "Motel Real: Las Vegas, Nevada," a CD-ROM which was exhibited accompanying his book *Grave Matters* at the Massachusetts Museum of Contemporary Art. He is currently curating an exhibition, entitled "Sensing Place," which will include his own art works, at the Sterling and Francine Clark Institute in Williamstown, Massachusetts.

**Ruth E. Toulson** is a socio-cultural anthropologist and Professor of Humanistic Studies at Maryland Institute College of Art. Her ethnographic research examines the relationship between religion and politics in Mainland China and Southeast Asia, particularly in Singapore. Her work focuses on processes of religious transformation, exploring why some ritual practices are discarded while others become orthopraxy. She is interested in the political lives of dead bodies, especially the circulation of religious relics, bodies, and body parts. Currently she is investigating these issues through the lens of the reform of death ritual. Her upcoming book is entitled *Transforming Grief: Life and Death in a Chinese Funeral Parlor*.

**Jevon Truesdale** founded Qico, a company offering alternative cremation technology, to help the global transition from traditional fire-based cremation to a biological, water-based process. This new technology eliminates carbon emission and is more energy efficient than traditional cremation. It has recently garnered the attention of a New York Times Best Selling Author for inclusion in her next book about the future of death. Truesdale has more than two decades of management experience in a wide range of industries. His other interests include movie palaces, specifically the Uptown Theater in Chicago, 35mm film preservation, and early-Mid-20th Century animation.

## Useful Facts

### Logistics / Spatial Limitations

- Over 50,000 people die in New York City annually
- Many urban cemeteries are at or near capacity for earthen burials
- No burials have been allowed in Manhattan south of 86th Street since 1851
- An aging post-war generation and increasing urbanization will result in rising numbers of annual deaths in many cities

### Organic Basis of the Human Body

- 99% of the mass of the human body is made up of just six elements: oxygen, carbon, hydrogen, nitrogen, calcium, and phosphorus
- The human body has essentially the same chemical basis as the earth itself, making it suitable to contribute to a natural ecology

### Options / Relative Environmental Impacts

- Embalmed, casketed burial – is resource intensive (hardwoods, steel, concrete) with risk of soil and ground water contamination from embalming fluids
- Cremation – requires extensive use of non-renewable fuels in combustion and produces CO<sub>2</sub> emissions and toxic hot gasses during incineration
- Alkaline hydrolysis – is a chemical reduction using lye under heat and pressure
- Promession – incorporates freeze-drying with liquid nitrogen, maintaining biological potency of remains (requires about one third of the energy of cremation)
- Bio-Methanization – is a process of Anaerobic Microbial Conversion accelerating organic decomposition, and may be energy positive
- Aerobic composting “green” burial – is un-embalmed, slow, organic decomposition

### Cultural Change

- 23 % of the total U.S. population, including 33 % of those under age 30, have no religious affiliation
- An ethos of environmentalism is increasingly embraced across all age groups
- Increased use of cremation in U.S. from ± 25 % in 2000 to ± 50 % in 2015
- Socio-ethical practices are malleable — e.g. organ donation, recycling, energy efficient standards, non-smoking areas, seat belts, etc

## Acknowledgements

We are enormously grateful for the support of this colloquium from the Columbia University community. The Columbia University Seminars and its Director, Robert Pollack pledged initial funding, giving us the confidence to pursue the project. We thank him for his continuing interest and engagement.

Our sincere appreciation goes to Amale Andraos, Dean of Graduate School of Architecture, Planning and Preservation, for the School’s many gifts in kind, enabling us to move the project forward. Mark C. Taylor was instrumental in connecting us with Karen Barkey, Director of Institute for Religion, Culture, and Public Life. We thank both of them for the Institute’s beneficent grant and for their personal unfailing encouragement. Our gratitude goes to the Earth Institute for its generous support and for sharing with us its Events Planning team led by Adrienne Kenyon. Alison Miller played a critical role in our initial interaction with the Earth Institute.

This project could not have been accomplished without the commitment of our DeathLAB associates, partners and researchers including Kartik Chandran, Jennifer Preston, Galen Pardee, Brendan Vogt, and the numerous Columbia GSAPP students whose optimism continues to advance DeathLAB’s initiatives.

We are obliged to our colleagues at the CU Seminar on Death for endorsing the colloquium and participating in its planning. From outside the Columbia University community, Tanya Marsh and Joseph W. Dauben have our praise and appreciation for their substantive contributions to the background compendium. We are also grateful to Plaza Jewish Community Chapel for underwriting a portion of the compendium.

Lily Wong and Manpreet Kaur have been indispensable in assisting us with many organizational details.

Finally, we want to recognize all the speakers, facilitators, and participants of the colloquium for their enthusiasm and interest in exploring how we can achieve environmentally sustainable forms of honoring the dead and creating new civic space for the city.

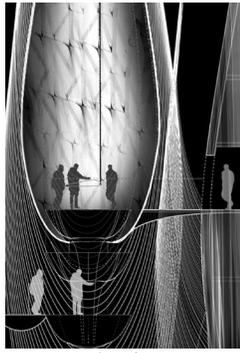
**Karla Rothstein**, Director  
Columbia University GSAPP  
DeathLAB  
kmr16@columbia.edu

**Christina Staudt**, Chair  
Columbia University  
Seminar on Death  
christinastaudt@gmail.com

Columbia University GSAPP DeathLAB



Tom McKeogh, Sp'10



Tom McKeogh, Sp'10



LATENT Productions, 2010



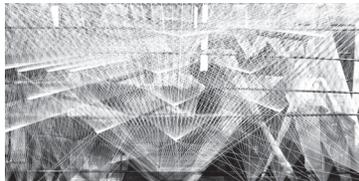
LATENT Productions, 2010



LATENT Productions, 2016



Natasa Papadi, F'11



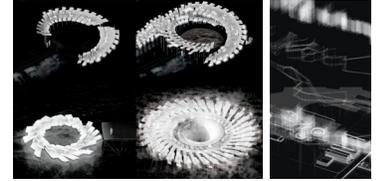
Margaux Young, S'12



LATENT Productions, 2013



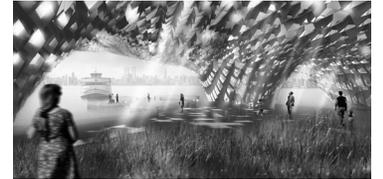
Jangwon Choi, F'11



Vitsam Chin, Elle Kim & Sha Li, F'14



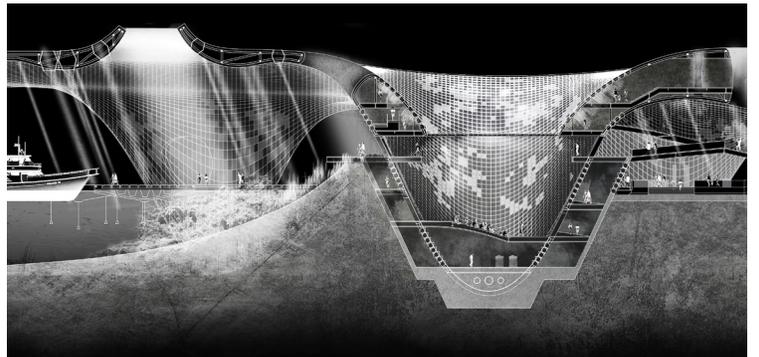
Vitsam Chin, Elle Kim & Sha Li, F'14



Liz Lin & Zhao Gao, F'13



Jangwon Choi, F'11



Liz Lin & Zhao Gao, F'13

