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# **EDUCATION**

McGill University	Montreal, Quebec	Biomedical Ethics	Postdoc, Current
Carnegie Mellon University	Pittsburgh, PA	Behavioral Decision Research	Ph.D., 2017
Carnegie Mellon University	Pittsburgh, PA	Behavioral Decision Research	MS, 2014
Carnegie Mellon University	Pittsburgh, PA	Decision Science & Philosophy	BS, 2012

# **RESEARCH INTERESTS**

Decision making under deep uncertainty, robust decision making, risk analysis, flood consequence analysis and cost benefit analysis.

# PROFESSIONAL EXPERIENCE

The Water Institute	Policy Researcher	2021-Present
McGill University	Post-doctoral Research Fellow, Biomedical Ethics Unit	2018–Present
Carnagie Mellon University	Head Teaching Assistant, Decision Analysis	2013–2018
	Teaching Assistant, Empirical Research Methods	2016–2017
Adobe Systems	Data Science Intern	2016
Carnagie Mellon University	Teaching Assistant, Behavioral Decision Making	2015
	Teaching Assistant, Policy Analysis I	2012–2014

# PROFESSIONAL SOCIETY MEMBERSHIPS

 Decision Making Under Deep Uncertainty Society, 2022–2024  Society for Judgement and Decision Making, 2014–2024

#### TEACHING EXPERIENCE

Head Teaching Assistant, Decision Analysis, Carnegie Mellon University (2013–2018). Teaching Assistant, Empirical Research Methods, Carnegie Mellon University (2016–2017). Teaching Assistant, Policy Analysis I, Carnegie Mellon University (2012–2014).

#### **NOTABLE PROJECTS**

## Policy Researcher/Barrier Island Sediment Management

Current

The Water Institute

Developing a Robust Decision Making Framework to evaluate the effectiveness of sediment management strategies for barrier islands across the Louisiana coastline.

## Policy Researcher/2029 Coastal Master Plan

Current

The Water Institute

Updating the consequence methodology used in the 2023 Coastal Master Plan to account for the different kinds of flooding in compound flood zones and the disparate impacts of flood damage based on socioeconomic factors.

# Policy Researcher/Policy Research to Improve the Evaluation of Nature Based Solutions in U.S. Army Corps of Engineers Programs

Current

The Water Institute

Updated existing cost benefit analysis for six selected USACE projects to incorporate newly monetized benefits for plans with nature-based solutions and the differential impacts of projects due to equity considerations.

#### **PUBLISHED WORKS**

#### **Peer-Reviewed Publications**

- Kane, P. B., Tebyanian, N., Gilles, D., McMann, B., & Fischbach, J. R. (2024). Key drivers of vulnerability to rainfall flooding in New Orleans. Frontiers in Climate, 6, 1303951.
- Kane, P. B., & Kimmelman, J. (2021). Is preclinical research in cancer biology reproducible enough?. Elife, 10, e67527.
- Kane, P. B., Bittlinger, M., & Kimmelman, J. (2021). Individualized therapy trials: navigating patient care, research goals and ethics. Nature medicine, 27(10), 1679-1686.
- Broomell, S.B. & Kane, P.B. (2021). Perceiving a Pandemic: The Effect of Superspreading Events on Pandemic Risk Perception Decision.
- Kane, P., Moyer, H., MacPherson, A., Papenburg, J., Ward, B., Broomell, S., & Kimmelman, J. (2020). Expert forecasts of COVID-19 vaccine development timelines. *Journal of General Internal Medicine*, 1–3.
- Kane, P., Benjamin, D., Barker, R., Lang, A., Sherer, T., & Kimmelman, J. (2020). Comparison of patient and expert perceptions of the attainment of research milestones in Parkinson's disease. *Movement Disorders*.
- Kane, P., & Broomell, S. (2020). Applications of the bias–variance decomposition to human forecasting. *Journal of Mathematical Psychology*, 98.
- Kane, P., Benjamin, D., Barker, R., Lang, A., Sherer, T., & Kimmelman, J. (2020). Forecasts for the attainment of major research milestones in Parkinson's disease. *Journal of Parkinson's Disease*, 1–9.
- Kane, P., Kim, S., & Kimmelman, J. (2020). What research ethics (often) gets wrong about minimal risk. *The American Journal of Bioethics*, 20(1), 42–44.
- Golman, R., Bhatia, S., & Kane, P. (2019). The dual accumulator model of strategic deliberation and decision making. *Psychological Review*.

- Broomell, S., & Kane, P. (2017). The perception of daily temperatures as evidence of global warming. *Weather, Climate, and Society*.
- Broomell, S., Winkles, J., & Kane, P. (2017). Public perception and communication of scientific uncertainty. *Journal of Experimental Psychology: General*, 146(2), 286–304.
- Kane, P., & Zollman, K. (n.d.). An evolutionary comparison of the handicap principle and hybrid equilibrium theories of signaling. *PLoS ONE*, *10*(9).

## **Technical Reports**

- Fischbach, Jordan R., Soupy Dalyander, Tim Carruthers, Colleen McHugh, Allison DeJong, Brett McMann, Abby Littman, Allison Haertling, Patrick Kane, and Craig A. Bond (2023). Case Study Analysis Results and Recommendations. The Water Institute of the Gulf. Funded by the U.S. Army Corps of Engineers Engineer Research and Development Center, Vicksburg, MS.
- Hemmerling, S. A., Kane, P., Littman, A., Cobell, Z., Diaz, O. Fischbach, J. R., Johnson, D. R., & Wang, J. (2023). 2023 Coastal Master Plan: Supplemental Material H6.1: Historic Storm Run Ike. Version 2. (p. 29). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.
- Hemmerling, S. A., Kane, P., Littman, A., Cobell, Z., Diaz, O., Fischbach, J. R., Johnson, D. R., & Wang, J. (2023). 2023 Coastal Master Plan: Supplemental Material H6.2: Historic Storm Run Rita. Version 2. (p. 29). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.
- Hemmerling, S. A., Kane, P., Littman, A., Cobell, Z., Diaz, O., Fischbach, J. R., Johnson, D. R., & Wang, J. (2023). 2023 Coastal Master Plan: Supplemental Material H6.3: Historic Storm Run Barry. Version 2. (p. 28). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.
- Hemmerling, S. A., Kane, P., Littman, A., Cobell, Z., Diaz, O. Fischbach, J. R., Johnson, D. R., & Wang, J. (2023). 2023 Coastal Master Plan: Supplemental Material H6.4: Historic Storm Run Ida. Version 2. (p. 28). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.
- Hemmerling, S. A., Kane, P., Littman, A., Cobell, Z., Diaz, O. Fischbach, J. R., Johnson, D. R., & Wang, J. (2023). 2023 Coastal Master Plan: Supplemental Material H6.5: Historic Storm Run Isaac. Version 2. (p. 28). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority
- Wilson, M. T., Fischbach, J. R., Johnson, D. R., Wang, J., Kane, P., Geldner, N., & Littman, A. (2023). 2023 Coastal Master Plan: Attachment E3: Nonstructural Protection Evaluation Results. Version 3. (pp. 36). Baton Rouge, Louisiana: Coastal Protection and Restoration Authority.

#### **Conference Proceedings and Presentations**

- Kane, P., Tebyanian, N. & Dalyander, S. (2023) Robust management of the Lower Most Mississippi River. Decision Making Under Deep Uncertainty Society, Delft, Amsterdam.
- Kane, P., Tebyanian, N., Swanson, T., Di Leonardo, D., Beltran Burgos, M. & Dalyander, S. (2023) Order up or abandon ship? Exploring critical thresholds for decision making in barrier island management. Decision Making Under Deep Uncertainty Society, Delft, The Netherlands.
- McHugh, C., Voron, N., Kane, P. Tebyanian, N., (2023) Understanding stormwater flood risk in New Orleans. State of the Coast, New Orleans, United States.
- Kane, P., DeJong, A. & Fischbach, J. (2022) The Risk of Delay: Robust decision making to improve implementation of Louisiana's Climate Action Plan. Decision Making Under Deep Uncertainty Society, Mexico City, Mexico.