

CURRICULUM VITAE

M. BEATRICE DIAS, PH.D.

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EDUCATION

Doctor of Philosophy (Ph.D.) degree in Engineering and Public Policy

Carnegie Mellon University, Pittsburgh, PA | August 2011

Master of Science degree in Engineering and Public Policy

Carnegie Mellon University, Pittsburgh, PA | May 2009

Bachelor of Arts (B.A.) degree with concentrations in Mathematics and Physics

Hamilton College, Clinton, NY | May 2004

Graduated Salutatorian & Summa Cum Laude

WORK EXPERIENCE

School of Education, University of Pittsburgh

July 2021 – Present

Assistant Professor of Digital Media, Learning and Leadership (July 2021 – Present)

- Build critical scholarship around digital media, technology, and education
 - Work with the Digital Media and Learning team to develop a School of Education program that grapples with digital literacy, design, and criticality in education
 - Conduct research at the intersections of community, technology, critical thinking, futurism and liberatory learning
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CREATE Lab, Carnegie Mellon University

December 2013 – June 2021

Co-Director of Outreach (Jan 2019 - June 2021)

Project Director (Apr 2015 - Jan 2019)

Community Outreach Coordinator (Dec 2013 - Apr 2015)

- **Community Engagement:** Forge and sustain authentic partnerships with various communities of practice, including educators, environmental organizations, community members, corporations, public institutions, and foundations.
- **Project Management:** Direct projects involving multiple stakeholders. Monitor progress to ensure that key objectives are being met, while adapting to the dynamic nature of human-centered work. Coordinate with cross-disciplinary teams to execute project deliverables.
- **Fundraising:** Co-author grant proposals to pursue new funding opportunities for the CREATE Lab, and to reenlist support from current funders. Produce grant reports to effectively communicate project plans and findings.

- **Writing:** Compose blog posts and other forms of documentation to disseminate lessons learned through collaborative explorations - most notably in work on the Fluency Project and with the Western Pennsylvania Writing Project.
- **Presentations & Events:** Deliver presentations on CREATE Lab projects and respond to media inquiries. Organize lab events and meetings and represent CREATE Lab at external functions and conferences.
- **Instruction:** Co-design, co-facilitate and assist with exploratory workshops, professional learning sessions, and technology trainings for educators and community members, in collaboration with partner organizations.
- **Research:** Support and conduct research efforts through participant engagement, data collection, survey design & implementation, qualitative analysis and documentation.

NOTABLE PROJECTS & GRANTS

AI & Humanity Exploration

- Work in partnership with the Western Pennsylvania Writing Project (WPWP) to co-design and co-facilitate exploratory engagements that investigate the intersection of artificial intelligence (AI) and humanity.
- To date, we collectively produced a series of five, in-person study group sessions from 2018 to 2019, and designed the “Grapple Series”, four virtual study group sessions, in partnership with the National Writing Project, from January through April 2020.
- These sessions were shaped to engage a multi-disciplinary audience of educators, technologists and community members in conversation about how AI affects society. No one group was positioned as an expert; all were invited to ask questions and follow that inquiry to build awareness and challenge thinking.
- Collaboratively curated and designed reading material and other media, along with games and activities, sparked conversations about: constructs of AI, implications of AI in education, issues of justice and bias in applications of AI, how gender and race inequities are encoded in AI, and the economic and systemic underpinnings of AI.

The Fluency Project

- Assisted in designing and coordinating professional learning sessions for educators, as part of the Fluency Project.
- The Fluency Project (Fluency) is a professional learning approach that engages educators in a deep exploration of the mindset and practices involved in the process of developing self-agency. Through this process, Fluency explores intentional and meaningful engagement with technology, media, and data.
- Conducted research to investigate if and how the Fluency process can be modeled at the elementary level of education. Data analysis and compilation of findings for this research are still in progress.

Grants:

Co-Investigator on grants for the Fluency Project: co-authored grant proposals and reports.

Awarded three years of funding from The Heinz Endowments:

- \$593,000 for inaugural year 2016-17
- \$897,000 for 2017-18
- \$750,000 for 2018-19

Smell Pittsburgh & Smell MyCity Mobile Phone Applications

- Project director for the Smell Pittsburgh (PGH) app, which crowdsources pollution odor reports and serves as a tool for residents to advocate for environmental justice in our region. Worked with an interdisciplinary team to prototype, design, test and deploy this app, in partnership with community organizations.
- Spearheaded launch of the Smell MyCity app – an expansion of the Smell PGH app to serve residents across the US. Smell MyCity is now active in Louisville, KY, Portland, OR and the Bay Area, CA.
- Delivered presentations and trainings on the apps at various community meetings, and served as project representative during media interviews and events.

Grants:

- Co-PI on grants to develop and sustain several CREATE Lab air quality projects, including Smell PGH. Awarded four years of funding from The Heinz Endowments:
 - o \$345,000 for 2017-18
 - o \$330,000 for 2018-19
 - o \$370,000 for 2019-20
 - o \$370,000 for 2020-21
- Co-PI on 2018 grant to expand Smell PGH into a national app. Awarded \$49,000 from The Heinz Endowments.
- PI on \$150,000 funding from Seventh Generation in 2018 to develop and pilot the Smell MyCity app.
- PI on \$50,000 funding from the Canary Fund in 2018 to establish Smell MyCity in Portland, OR.
- PI on \$35,000 funding from Drexel University in 2019 to establish Smell MyCity in the Bay Area, CA.

CREATE Lab Satellite Network

- Build and sustain partnerships with a collection of higher education partners in Pennsylvania, West Virginia, Georgia, and Utah.
- Work in partnership with education partners and team at CREATE Lab to explore meaningful integration of technology in education settings.

Grants:

- Collaborator on 2015 grant from the Benedum Foundation to work with members of the Satellite Network on exploring projects in the natural and built environment. Awarded \$150,000.

- Co-Investigator on two years of grants from the Infosys Foundation to establish CREATE Lab Satellites in Utah and Atlanta. Awarded \$250,000 in 2016 and \$150,000 in 2017.

Speck Indoor Air Quality Monitor

- Led community engagement efforts for the Speck indoor air quality monitor, to empower everyday citizens, through data access and literacy, to mitigate air quality issues in their homes, schools and indoor workplaces.
- Conducted user tests and research to inform interface design and supporting materials.
- Co-created educational material to communicate actions that may mitigate air pollution risks indoors.
- Delivered presentations and trainings on Speck at various community meetings, and served as project representative during media interviews and events.
- Headed efforts to place Speck air quality monitors in Carnegie Library of Pittsburgh branches across the city, so they would be more accessible to residents.
- Coordinated the transition to a spinoff venture for this product.

Grants:

- Co-PI on 2014 grant of \$20,000 from The Fine Foundation to establish the Speck library program with the Carnegie Library of Pittsburgh.
- Co-PI on 2015 Metro21 grant of \$38,000 to investigate community empowerment through Speck library program.

CONTEXT Conference 2015 and 2017

- Co-produced the 2015 CONTEXT Conference that hosted about 200 participants, and supported organization of the 2017 CONTEXT Conference of similar capacity.
- CONTEXT was designed as a forum for educators, administrators, community organizations, and other stakeholders to consider innovative applications of data and technology in teaching and learning environments.
- The theme for the 2015 CONTEXT Conference was ‘Technology Fluency for Teaching & Learning’; and the theme for the 2017 CONTEXT Conference was ‘Tech and Data Fluency for Teaching & Learning’.

TechBridgeWorld, Carnegie Mellon University

June 2012 – December 2013

Postdoctoral Fellow

- Established new and sustained existing international research partnerships with different community groups.
- Evaluated TechBridgeWorld projects and programs, and supported fundraising efforts.
- Assisted with teaching courses and mentored student interns.
- Actively participated in project, program and event planning and coordination.

Larsen & Associates, P.L.

September 2011 – July 2012

Data Management Consultant

- Developed tools that can streamline the firm's billing and filing systems.

CIGNA Group Insurance

August 2004 – July 2006

Actuarial Analyst

- Analyzed monthly financial results to ensure the business holds sufficient reserves.
- Successfully completed first two Society of Actuaries Examinations; November 2004 and May 2005.

ADDITIONAL PROFESSIONAL EXPERIENCE

World Economic Forum

September 2020 – Present

Fellow – Global Future Council on Artificial Intelligence for Humanity (2020-2021)

- Capture, synthesize and disseminate insights from the council's deliberations.
- Work with council members and World Economic Forum staff to support the design and development of the council's initiatives related to AI fairness.

University of Pittsburgh

August 2020 – Present

Researcher Participant – Shifting Power in Educational Research and Development

- Collaborate with an educator partner to co-develop and implement a research project within a framework for educational research and development that centers Black and Latinx educators and students.

Allegheny CleanWays

April 2019 – Present

Board Member

- Lead a newly formed team to envision broader and longer-term engagement around education and outreach efforts.
- Serve on the Marketing Committee to determine avenues for fundraising that promote the mission of the organization.

Fetzer Institute

September 2011 – June 2013

Consulting Advisor – Advisory Council for the Engineering Professions

- Reviewed and nominated exemplary Engineering projects and programs for budgetary support from the Fetzer Institute.

PROFESSIONAL LEARNING

Carlow University

Fall 2020

Participant - Madwomen in the Attic Creative Writing Workshops

- Participated in a poetry workshop to develop my creative writing practice.

University of Pittsburgh

Summer 2018

Participant – Western Pennsylvania Writing Project’s Teachers as Thinkers Summer Program

- Joined a weeklong professional learning workshop designed to engage educators in reflection and exploration through writing.
- Worked with a team of educators to grapple with identity, community and systems through a collaborative and creative process.

PUBLICATIONS

ARTICLES

- Hsu, Y.-C., Cross, J., Dille, P., Tasota, M., **Dias, B.**, Sargent, R., Huang, T.-H. and I. Nourbakhsh. “Smell Pittsburgh: Engaging Community Citizen Science for Air Quality.” *ACM Transactions on Interactive Intelligent Systems*, article no.: 32, November 2020.
- Wong-Parodi, G., **Dias, M. B.** and Taylor, M. “Effect of Using an Indoor Air Quality Sensor on Perceptions of and Behaviors Toward Air Pollution (Pittsburgh Empowerment Library Study): Online Survey and Interviews.” *JMIR mHealth uHealth*, 6(3):e48, March 2018.
- Dias, M. Bernardine, Teves, E. and **Dias, M. Beatrice**. “Preparing Engineers for a Global Future through Guided Opportunities to Innovate for Underserved Communities.” *Journal of Engineering Education Transformations*, Volume 29, No.1, 26-37, July 2015.
- **Dias, M. B.**, Reyes-Gonzalez, L., Veloso, F. M. and Casman, E. A. “Effects of the USA PATRIOT Act and the 2002 Bioterrorism Preparedness Act on select agent research in the United States.” *PNAS* 107.21, May 2010.

CONFERENCE PAPERS & PRESENTATIONS

- **Dias, B.**, King, M., Kaminsky, J., Mroziak, J. and Martinez, A. “Living and Learning in the Wild: What We Learned Exploring Artificial Intelligence, Ethics, and Education.” *Proceedings of the 2019 Connected Learning Summit*, pp 268, October 2019.
- Hsu, Y.-C., Cross, J., Dille, P., Tasota, M., **Dias, B.**, Sargent, R., Huang, T.-H. and I. Nourbakhsh. “Smell Pittsburgh: Community-Empowered Mobile Smell Reporting System.” *In 24th International Conference on Intelligent User Interfaces*, March 2019.
- **Dias, M.B.**, Taylor, M.D. and Nourbakhsh, I.R. “Community Deployment of Low-Cost Indoor Particulate Monitors.” *A&WMA Annual Conference*, (108th), June 2015.
- Dias, M. Bernardine, Teves, E. and **Dias, M. Beatrice**. “Towards technology with a global heart through compassionate engineering.” *2015 Conference on Raising*

Awareness for the Societal and Environmental Role of Engineering and (Re)Training Engineers for Participatory Design (Engineering4Society), pp. 96-100, June 2015.

- **Dias, M. Beatrice**, Nuffer, D., Velazquez, A., Teves, E. A., Alismail, H., Belousov, S., Dias, M. F., Abimbola, R., Hall, B. and Dias, M. Bernardine. “Using Mobile Phones and Open Source Tools to Empower Social Workers in Tanzania.” Poster presented at the *IEEE/ACM Conference on Information and Communication Technologies and Development*. December 2010.

UNPUBLISHED DISSERTATION

- **Dias, M. Beatrice**. “Evaluation of Policy and Research Interventions in Science & Technology: Consequence Assessment of Regulatory and Technology Transfer Programs.” Carnegie Mellon University.

BOOK CHAPTERS

- **Dias, M. Beatrice**, Teves, E. A., Zimmerman, G. J., Gedawy, H. K., Belousov, S. M. and Dias, M. Bernardine. “Indoor navigation challenges for visually impaired people.” in Hassan A. Karimi (Ed.) *Indoor Wayfinding and Navigation*, Boca Raton, FL: CRC Press, pp. 141–164, 2015.
- Dias, M. Bernardine, Steinfeld, A., **Dias, M. Beatrice**. “Future Directions in Indoor Navigation Technology for Blind Travelers,” in Hassan A. Karimi (Ed.) *Indoor Wayfinding and Navigation*, Boca Raton, FL: CRC Press, pp. 203-226, 2015.

TECH REPORT

- **Dias, M. Beatrice**, Dausey, D., Casman, E. and Dias, M. Bernardine. “The PREval (Pilot Research Evaluation) Framework Evaluating Pilot Projects in Information Communication Technology for Development (ICTD).” CMU-RI-TR-11-02, The Robotics Institute, Carnegie Mellon University, February 2011.

BLOG POSTS

- “Deficit Dialect,” by **Beatrice Dias**. *The Fluency Project Blog*, September 2020
- “Collective Wisdom,” by **Beatrice Dias**. *The Fluency Project Blog*, July 2020
- “Grapple Series #4: Humanity. What Does it Mean to be human?,” by **Beatrice Dias**, Michelle King and Laura Roop. *Educator Innovator Blog*, June 2020.
- “Grapple Series, Session 3: Economics of AI,” by **Beatrice Dias**, Michelle King and Laura Roop. *Educator Innovator Blog*, April 2020.
- “The Grapple Series, Session 2: Algorithms & Justice,” by **Beatrice Dias**, Michelle King and Laura Roop. *Educator Innovator Blog*, March 2020.
- “The Grapple Series Session 1: AI...What?!” by **Beatrice Dias**. *Educator Innovator Blog*, February 2020.
- “Fluency Mindset,” by **Beatrice Dias**. *The Fluency Project Blog*, September 2017.

MEDIA APPEARANCES

- “CMU Researchers Named to World Economic Forum Global Future Councils,” by Jean Hayes. *Carnegie Mellon University News*, October 26, 2020.
- “Pittsburghers have been driving less during the pandemic. Why isn’t air pollution going down?” by Julia Maruca. *Pittsburgh City Paper*, May 29, 2020.
- “Carnegie Mellon’s Pittsburgh smells app goes nationwide, crowdsourcing where the air is worst,” by Amy Sisk. *StateImpact Pennsylvania*, April 10, 2019.
- “Report stinky spots in your city with this free app,” by Mark Wilson. *Fast Company*, April 2, 2019.
- “Smell MyCity Is Louisville’s Smell Something, Say Something App,” by Ryan Van Velzer. *89.3 WFPL News Louisville*, March 30, 2019.
- “When you smell something funky in Louisville, there’s an app for that,” by James Bruggers. *Courier Journal*, March, 15, 2018.
- “Carnegie Mellon scientists use app to track foul odors in Pittsburgh,” by Ashley Murray. *Pittsburgh Post-Gazette*, July 3, 2017.
- “Smell PGH app is improved, with new website,” by Amanda Waltz. *NEXTpittsburgh*, June 22, 2017.
- “Smell PGH lets you report weird smells in Pittsburgh,” by John Biggs. *TechCrunch*, June 22, 2017.
- “Smelly air? There’s an app for that: Smell PGH turns odorous complaints into official reports on pollution,” by Stephen Riccardi and Beatrice Dias. *Op-Ed: Pittsburgh Post-Gazette*, Mar 26, 2017.
- “If You Smell Something, Say Something: CMU Launches Mobile App Smell PGH,” by Adam Shuck. *The Glassblock*, September 29, 2016.
- “Pike library to lend air-pollution monitors,” by Jessica Cohen. *Times Herald-Record*, October 5, 2015.
- “CMU Tech Company Aims to Empower Pittsburgh with Cleaner Air,” by Jessica Nath. *90.5 WESA*, March 30, 2015.

HONORS & SKILLS

- **Honors**
 - 2020 Staff Service Award for Citizenship – School of Computer Science, Carnegie Mellon University
 - August 2006 CIT Deans Fellowship – Carnegie Mellon University
- **Qualitative Skills**

Program/Project Management, Community Engagement, Grant & Report Writing, Research, Survey Design & Implementation, Strategic Planning
- **Computer Skills**
 - Proficient In: MS Office Software, Google Apps (Docs, Sheets, Forms, Slides), Video Conferencing (Zoom, Google Meet), SurveyMonkey, Adobe Acrobat
 - Basic Level: Website Management & Editing, Adobe Illustrator & InDesign