

Duke Support for Interdisciplinary Graduate Networks (D-SIGN)

2018-2019 SUMMARY REPORT



Background

Together Duke, the university's 2017 academic strategic plan, includes a goal to [provide a transformative educational experience for all students](#) and sets forth increased opportunities for graduate and professional school students to prepare for a wide array of career options.

One of these opportunities is [Duke Support for Interdisciplinary Graduate Networks \(D-SIGN\)](#). By enabling graduate students to build or extend their networks and to integrate collaborative, cross-school experiences into their programs, D-SIGN increases the number of individuals whose graduate training reflects Duke's commitment to interdisciplinarity and knowledge in the service of society. Such experiences deepen our students' exposure to interdisciplinary collaboration, key preparation for both academic positions and nonacademic career trajectories.

For the 2018-2019 academic year, a [January 2018 request for proposals](#) invited all current Duke graduate students to propose an interdisciplinary project, training, or experience lasting up to a year. Proposals were reviewed by an ad hoc committee convened by the Vice Provost for Interdisciplinary Studies with representation from faculty, institute directors, and graduate students.

2018-2019 D-SIGN Recipients

Six groups received [2018-2019 D-SIGN grants](#), forming the third cohort of D-SIGN recipients. The 23 student organizers came from Arts & Sciences, Pratt School of Engineering, Nicholas School of the Environment, Divinity School, and the Sanford School of Public Policy. Nineteen were doctoral students; four were master's students. The average award was \$9,210.

Group	Purpose	Student Organizers	Faculty Sponsor(s)
Duke-ACRE Partnership	Address wastewater treatment in Lowndes County; evaluate strategies to address the problem and creatively represent the human face of the issue	Katherine Pringle , M.A. in Economics; Ryan Juskus , Ph.D. in Religion; Emma Lietz Bilecky , M.E.M.	Erika Weinthal
Fostering Community Participation in the Arts	Promote equal role between creator and community member; present four performative works to Duke and Durham communities	James Budinich and Brooks Frederickson , Ph.D. in Music Composition; Rebecca Uliasz , Ph.D. in Computational Media, Arts, and Cultures	Scott Lindroth , Bill Seaman
Riding the Belt and Road	Ignite discussion among students and faculty members on multiple facets of China's new Belt Road Initiative, with a focus on environmental impacts	Yating Li and Seth Morgan , Ph.D. in Environmental Policy; Travis Dauwalter , Ph.D. in Public Policy; Zainab Qazi and Santiago Sinclair Lecaros , M.E.M.	Billy Pizer , Elizabeth Losos , Indermit Gill , Kathinka Fürst

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Social Science Methods Network	Create an environment in which graduate students working on social scientific projects can engage in methodological debates and collaboration as they work on turning research findings into publishable outputs	Valerie-Jean Soon and Kobi Finestone , Ph.D. in Philosophy; Peng Peng , Ph.D. in Political Science	Kevin Hoover , Timur Kuran
Theology, Religion, and Qualitative Methods Network	Employ methodological tools from the social sciences to better understand how cultural groups talk about holy figures and navigate ritual engagement with the sacred	Michael Grigoni , Emily Dubie , and Ryan Juskus , Ph.D. in Religion; Dustin Benac and Sarah Jobe , Th.D.	Luke Bretherton
Water, Sanitation, and Hygiene Interdisciplinary Network of Graduate Students (WaSHINGS)	Establish a platform allowing engineers, policy makers, educators, and entrepreneurs to share their perspectives and collaborate on strategies to improve water sanitation	Lucas Rocha Melogno , Stewart Farling , Siddharth Kawadiya , Billy Gerhard , and Brandon Hunter , Ph.D. in Civil and Environmental Engineering; James Thostenson , Ph.D. in Electrical and Computer Engineering	Marc Deshusses

Selected Activities and Accomplishments

Fostering Community Participation in the Arts

On October 19 and 20, 2018, musicologist Kerry O’Brien from Cornish College of the Arts visited Duke to discuss the work of American composer Pauline Oliveros. O’Brien presented an on-campus lecture based on her *New Yorker* article “[Listening as Activism: The ‘Sonic Meditations’ of Pauline Oliveros.](#)”



O’Brien also co-led an afternoon of Oliveros’ Sonic Meditations and Deep Listening exercises with Duke New Music Ensemble Director Brooks Frederickson at Global Breath yoga studio in downtown Durham. Participants breathed, moved, sang, and played instruments together in an event that blurred the line between performer and audience member.

In January 2019, the group’s events included workshopping and performing improvisation-based works, written by Duke undergraduate and graduate students, as well as a world premiere by Stephanie Griffin. Griffin and Hilliard Greene, visiting artists for these events, joined the Duke New Music

Ensemble in preparing these pieces. Griffin, who has a classically trained background, and Greene, a jazz musician, also discussed their own approaches to improvisation, and how they perform together as a viola-bass duo in their talk at the Rubenstein Arts Center.

At Arcana in downtown Durham, the group hosted a collaboration with three local visual artists (Sydney Steen, Erin Canady, and Leah Smith), who created visual works that the Duke New Music Ensemble interpreted as sound.

Margaret Schedel's April visit began with a public hands-on DIY electronic instrument-building workshop, led in collaboration with Matthew Blessing. A musical group of undergraduate, MFA, and Ph.D. students then presented Schedel's work with the newly constructed instruments the following day at The Mothership. A culminating event will take place in late August 2019.

Our first three sets of events have been extremely successful in building connections between Duke students and community members. Our approach of connecting with community partners has proved fruitful; the local venues have supported our artistic endeavors and connected us with their regular clientele, and working with local artists have built artistic connections in our local community.

— James Budinich

Riding the Belt and Road

Catalyzed by a D-SIGN grant in 2018-2019 and housed at the Duke University Energy Initiative, the Riding the Belt and Road network ignited discussions among students and faculty members on multiple facets of China's Belt Road Initiative, including its historical and geopolitical background, financial arrangement, business practices, and impacts on environment, energy, and development.



On September 7, 2018, more than 60 students and faculty members attended the kick-off event. The presenters included Jackson Ewing, Lydia Olander, Elizabeth Losos, Seth Morgan, Sara Mason, Erik

Myxter-lino, Xiaolan You, Zainab Qazi, and Yating Li, covering a wide range of perspectives including roads and power plants, ecosystem impact, a framework to understand what leads to greener projects, and the implication of machine learning techniques to identify infrastructure.

The network hosted an event with Mia Bennett from the University of Hong Kong, who discussed how the BRI can be studied from space. With the Center for International and Global Studies, the network cohosted a conversation with Charles Stevens, cofounder of [The New Silk Road Project](#). With support from the Nicholas Institute, the group brought together Ariel BenYishay from the College of William and Mary and Rebecca Ray from Boston University to [discuss how to construct a sustainable future](#).

In October 2018, the network supported three graduate students to attend the Duke-DKU International Symposium on Environmentally and Socially Responsible Outbound Foreign Direct Investment, held at Duke Kunshan University. Building on the discussion, Elizabeth Losos and Lydia Olander from the Nicholas Institute proposed an international institutional collaboration, Gateway for Sustainable Infrastructure. The network supported a follow-up workshop on April 17, 2019, to further the discussion on areas of collaboration among key participants around the world.

The network also supported one group masters project, one individual masters project, and one Ph.D. dissertation chapter.

The purpose of building a network, unlike a research project, is to provide support and create linkages. On a cutting-edge topic like BRI, there are many ongoing research projects across the campus – both at Duke and at DKU, but researchers – graduate students and faculty members alike – do not always have the time and efforts to be connected and to benefit from others' perspectives. Our network fills this gap and connects the dots.

— Yating Li

Theology, Religion, and Qualitative Methods Network

The network brought together graduate students from the Divinity School and Duke's graduate programs in Religion, Sociology, and History to enhance collaboration in the use of qualitative methods by humanists and theologians. Participants gathered monthly to discuss practical concerns related to methods such as participant-observation and qualitative interviewing, and the possibilities and challenges that emerge from the use of such methods.

Each meeting focused on a set of texts that address the use of qualitative methods from a variety of disciplinary perspectives. Two initial readings framed the conversation: Jon Bialecki's "Anthropology and Theology in Parallax" outlines the ethnographic turn among theologians from the perspective of a leading anthropologist, and Frédéric Vandenberghe's "Sociology as Practical Philosophy and Moral Science" considers the possibility of a moral sociology.



Jon Bialecki joined the network via Skype to discuss his *A Diagram for Fire: Miracles and Variation in an American Charismatic Movement*. Todd Whitmore, a key figure in the ethnographic turn in theology,



joined the network for a discussion of his *Imitating Christ in Magwi: An Anthropological Theology* in the context of a lunch workshop.

In concert with Whitmore's visit, the network extended its reach to Duke's broader academic community by hosting a panel discussion on March 29, 2019, which considered the history and promise of qualitative approaches for theological research and inquiry. Titled "Looking Back, Looking Forward:

Reflections on Theology and the Social Sciences," this panel was moderated by Luke Bretherton (Divinity School) and featured reflections from David Eagle (Duke Global Health Institute), Jan Holton (Divinity School), and Todd Whitmore (University of Notre Dame).

Panelists and participants considered prospects for convergence and exchange between theologians and social scientists. Panelists spoke optimistically of using qualitative methods to raise theological questions and develop constructive theological proposals. The event was featured on the website of [The Network for Ecclesiology & Ethnography](#).

Water, Sanitation, and Hygiene Interdisciplinary Network of Graduate Students (WaSHINGS)

This new student organization hosted a series of seminars with speakers to engage with the greater Water, Sanitation, and Hygiene (WaSH) community. Around 20 graduate students from the Nicholas School of the Environment, Sanford School of Public Policy, and the Pratt School of Engineering regularly attended the group's events.

Brian Hawkins talked about the development of novel sanitation technologies at the Center for WASH-AID at Duke, including rapid deployment and appropriate scaling practices. Marc Deshusses shared highlights from his research group, including several projects in WaSH. Jackie MacDonald Gibson shared her career path that led her to use her STEM background to guide policy-making at the national and international level. Marc Jeuland showed the importance of economic and behavior analyses for successful WaSH technology implementation. Finally, Jeffrey Piascik held an interview-style seminar during which he shared how his work experience outside of academia shaped his approach to WaSH challenges as the president of Biomass Controls, LLC.



The group also conducted a drinking water quality assessment at a predominately African-American community in North Carolina. Despite being surrounded by municipal water distribution lines, this community relies on well water for its supply and on-site septic tanks for sanitation needs. Through a collaboration with the University of North Carolina – Chapel Hill, an IRB protocol was drafted and approved and water samples were taken from the community. The researchers tested the samples for fecal indicator microorganisms and antimicrobial resistance, and identified pollution sources through microbial source tracking. The results will be shared with the community, and a scientific manuscript will be drafted by December 2019.



Looking Ahead: 2019-2020 Grantees

Two graduate student groups [received D-SIGN grants for use in 2019-2020](#). The nine student organizers came from Arts & Sciences, Law, Medicine, Nicholas School of the Environment, and Pratt School of Engineering. Seven are doctoral students, one is a master’s student, and one is a J.D. student. The average award was \$9,780.

Group	Purpose	Student Organizers	Faculty Sponsor
Duke University Environmental Justice Network	Address wastewater treatment in Lowndes County; evaluate strategies to address the problem and creatively represent the human face of the issue	Brandon Hunter , Ph.D. in Civil and Environmental Engineering; Katy Hansen , Ph.D. in Environmental Policy; Walker Grimshaw , M.E.M. (Duke) and M.S in Environmental Sciences and Engineering (UNC); Wen Wang , Ph.D. in Economics; Elsa Haag , J.D. in Law	Megan Mullin
Triangle Molecular Simulation Society	Promote equal role between creator and community member; present four performative works to Duke and Durham communities	Jonathon Yuly , Ph.D. in Physics; Jesús Valdiviezo Mora , Ph.D. in Chemistry; Jacob Lindale , Ph.D. in Chemistry; Shannon Eriksson , M.D./Ph.D. in Clinical Science/Chemistry	David N. Beratan

Learn More

For more information, please visit the [D-SIGN](#) page on our website or [contact](#) the Office of the Vice Provost for Interdisciplinary Studies (216 Allen Building, 919-684-1964, interdisciplinary@duke.edu).