



# Exploring Roles for Librarians on Interdisciplinary Research Teams: A Collaboration between the University of Miami's Office of Research and Libraries

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James Sobczak, STEM Librarian

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# University of Miami: Fast Facts (Fall 2019)

- Private, nonsectarian, not-for-profit
- R1 institution; \$358M in research expenditures
- 11k undergrads, 6k grads, 16k faculty and staff
- 3 Campuses: Coral Gables, Medical, Marine & Atmospheric Sciences
- 11 schools and colleges; 180 majors and degree programs
- 7 libraries (Interdisciplinary, Law, Medical, Music, Architecture, Business, Marine & Atmospheric Sciences)



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# Collaboration Inspired by Strategic Conversation

## Collaborative Partners:

- UM Office of the Vice Provost for Research
  - Administrators with faculty homes in Communication and Medicine
- UM Libraries
  - Subject / liaison librarians
  - Digital Scholarship librarians



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# Key Questions Driving Partnership

- How can the university advance solutions to societal problems?
- What is necessary to stimulate team-based interdisciplinary research?
- What do researchers most need to be successful?
- How might librarians contribute?





## Call for Proposals

U-LINK seeks applications from interdisciplinary teams comprised of researchers from across UM's three campuses.

[LEARN MORE >](#)

# Addressing the world's most compelling problems

Interdisciplinary Inquiry, one of the transformative initiatives of the University of Miami's Roadmap to Our New Century, supports teams of scholars from multiple disciplines in collaborative, problem-based inquiry to address the complex challenges of society.



## **University of Miami Laboratory for Integrative Knowledge (U-LINK)**

Key Elements include:

- Program to support **problem-based interdisciplinary research**
- **Phased funding** opportunities for research teams
- **Science of Team Science (SciTS) training** for research teams
- **Interdisciplinary opportunities for UM students**
- Team-building through informal and formal **dinner, symposia, and seminars**
- **Creation of gathering spaces in UM Libraries** on three campuses
- Acknowledge importance of collaborative research in **hiring, promotion, tenure**

For more information, see: <https://ulink.miami.edu/about/index.html>

# Science of Team Science Training



INSciTS

Building the knowledge base  
for effective team science

International Network for the Science of Team Science

Member Login 

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**Save the date!**

**12<sup>th</sup> Annual International  
Science of Team Science Conference**

**June 7-9, 2021**

**Hosted by Virginia Tech**

# U-LINK Library Spaces for Interdisciplinary Research



Faculty Exploratory, Richter Library – Pilot Space for Future Faculty Research Commons

# U-LINK Teams 2018 – 2020 and their Librarians

1st Round (2018)	<i>schools</i>	2nd Round (2019)	<i>schools</i>	3rd Round (2020)	<i>schools</i>
<b>HURAKAN: Improving hurricane risk communication for vulnerable populations</b> Librarian: Zsuzsanna Nemeth	<i>Communication Education Medical</i>	<b>Facial Profiling: Criminal Justice Disparities in Miami Dade County</b> Librarian: Cameron Riopelle	<i>Arts &amp; Sciences Law</i>	<b>Developing Integrated Solutions for Sustainably Feeding the World, Improving Coastal Water Quality, and Building Resiliency in Coastal Communities</b> Librarian: Angela Clark	<i>Arts &amp; Sciences Marine Science Medical</i>
<b>Systems Approach to Controlling the Online Rise of Extremism (SCORE)</b> Librarian: Lisa Baker	<i>Arts &amp; Sciences Communication Engineering</i>	<b>Personalize Treatment after Brain Injury</b> Librarian: Zsuzsanna Nemeth	<i>Arts &amp; Sciences Medical</i>	<b>Characterization and prevention of hazardous occupational noise and its negative health consequences</b> Librarian: Zsuzanna Nemeth	<i>Engineering Communication Medical</i>
<b>Advancing Interdisciplinary Research on the Microbiome to Optimize Health</b> Librarian: Vera Spika	<i>Arts &amp; Sciences Marine Science</i>	<b>Hyper-Localism: Transforming the Paradigm for Climate Adaptation</b> Librarian: Angela Clark	<i>Architecture Arts &amp; Sciences Communication Marine Science</i>	<b>Augmented Reality for Applied Behavior Analysis—Evaluations, Creations, and Applications</b> Librarian: Vanessa Rodriguez	<i>Arts &amp; Sciences Communication Engineering</i>
<b>Engineering Coastal Resilience Through Reef Restoration</b> Librarian: Angela Clark	<i>Engineering Marine Science</i>	<b>Leveraging Untapped Opportunities in Place and Time: A Community Based Child Well-Being Collaborative</b> Librarian: Vera Spika	<i>Arts &amp; Sciences Computational Science Medical</i>	<b>On the Move: Climate Migration and Retreat in South Florida, the Caribbean, and Beyond</b> Librarian: Nicholas Mignanelli	<i>Arts &amp; Sciences Business Law</i>
<b>Integrating Oceans and Human Health Sciences</b> Librarian: Angela Clark	<i>Arts &amp; Sciences Engineering Marine Science Medical</i>	<b>Inclusion Matters in the Data Revolution</b> Librarian: Lauren Fralinger	<i>Computational Science Education Law</i>	<b>From Individual to Collective Wellbeing: Smart Technology Ecosystem for Personalized Mood Modulation</b> Librarian: Amy Strickland	<i>Education Communication Music</i>
		<b>Next Generation of Coastal Structures</b> Librarian: James Sobczak	<i>Architecture Arts &amp; Sciences Business Engineering Marine</i>		



## U-LINK Librarian

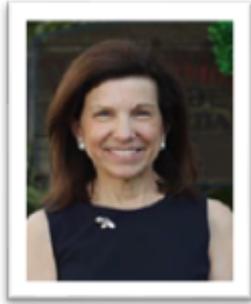
Angela Clark-Hughes, Director, Rosenstiel School Library

- BS in Community Psychology from Georgia State University (1995)
- MLIS from Simmons College (2000), Beta Phi Mu
- Joined University of Miami (2004)
- President-Elect (2021-2022) - International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC)

# Hyper-Localism: Transforming the Paradigm for Climate Adaptation



Atmospheric  
Sciences



Architecture



English



Communication  
Studies



Marine  
Geosciences



Information  
Sciences



UNIVERSITY  
OF MIAMI



GIS /  
Mapping



Communications,  
PhD Student

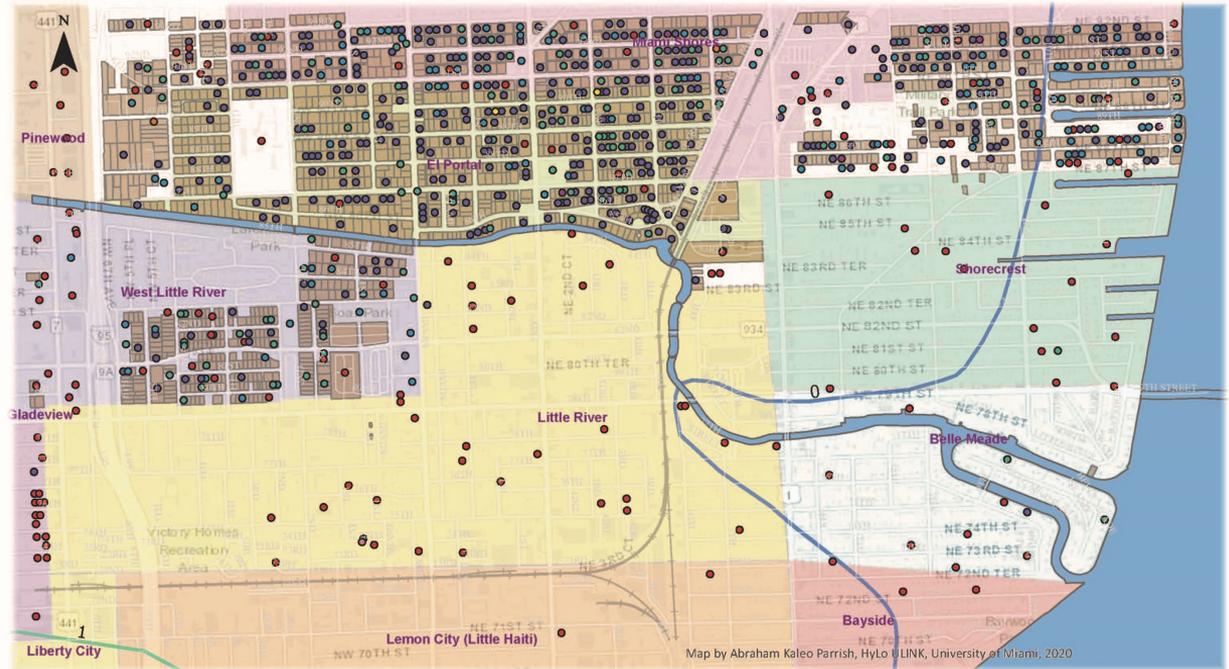


CATALYST  
M I A M I



# Integrated Climate Risk Assessment (ICRA)

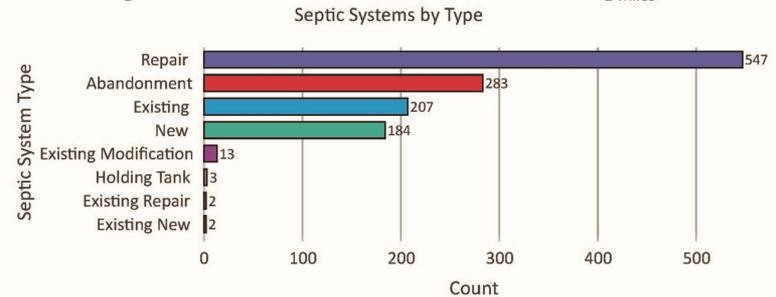
- Elevation
- Greenness
- Wealth Distribution
- Housing
- Heat
- Hydrology
- **Septic**

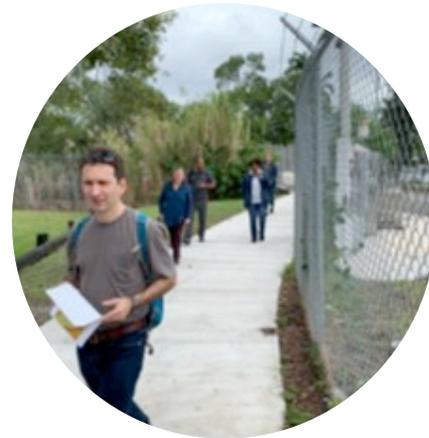


Base maps: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



Little River Neighborhood in Miami, FL





Evaluating storm drain pumping stations, after a heavy rain event.

Photos: Tyler Harrison

# Photovoice



“Frequent Flooding: Too Deep to drive through”



“Broken Bus Bench in the sun”



“The tree provides some shade”

# Design Thinking

**DISCOVER: Daily Experience**  
// What is going on around me?  
(1) WHAT DO I THINK? (2) WHAT DO I OBSERVE?  
(3) WHAT DO I HEAR? (4) WHAT DO I SAY AND DO?  
GAIN: Concerns, Frustrations, Obstacles  
GAIN: Wants & Needs, Resources of Business, Dreams & Hopes

**FRAME: Framing the Challenge**  
// Focus on 3 leading areas  
What is the existing state? What is the ideal state? How do we...  
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What is the existing state? What is the ideal state? How do we...

**IDEATE: Impact/Effort Matrix**  
// What is your fastest challenge?  
High Impact / Low Effort: Possible Sprints  
High Impact / High Effort: Major Projects  
Low Impact / Low Effort: Fill-ins  
Low Impact / High Effort: Quick Wins

**BUILD: Adjacencies Map**  
// Identify the relevant constituencies, partners, advocates, decision-makers and relationships needed.  
A diagram showing three concentric circles of varying shades of blue, representing different levels of adjacency or relationship.



## **I have contributed as a team member by:**

- Helping develop, test and create the Integrated Climate Risk Assessment (ICRA) protocol.
- Facilitating Photovoice and Design Thinking Workshops with two Miami communities.
- Collaborating on two articles on our protocol and study results
- Co-writing a successful grant proposal for external funding (Received 2020)



**Roadmap**   **Research**

# U-LINK Hyper-Localism project receives support from AT&T

How coastal communities in Miami-Dade and elsewhere respond on a local rather than regional scale to sea level rise is the major goal of the Hyper-Localism U-LINK project.

By Robert C. Jones Jr.

01-06-2020

The multidisciplinary project explores how coastal communities respond and adapt to rising sea levels.

A \$50,000 grant from telecommunications giant AT&T will help a team of University of Miami researchers advance their work on how coastal communities respond on a local rather than regional level to one of the most damaging consequences of climate change—sea level rise.





# *A Hyperlocal Approach to Climate Adaptation*

*Creating collaborative solutions to  
climate problems.*

Our vision is a new, dynamic team process that allows governmental and nonprofit organizations across the country to hear and learn from communities at the neighborhood level and together envision and apply effective and equitable climate adaptation solutions.



## U-LINK Librarian

James Sobczak, STEM Librarian

- MLIS from the University of Washington (2018)
- MArch from Yale University (2012); BS in Architecture (2007)
- Joined the University of Miami in October of 2018



# My U-LINK Teams

Next Generation Coastal Structures



Plastics as Material Cultures





## How I have contributed as a team member?

1. Conduct preliminary literature searches
2. Coordinate library meeting spaces
3. Collaborate on the scholarly output of my ULINK teams
  - Help author (or at least contribute to) articles, presentations, op-eds
4. Engage and promote emerging technologies
  - Examples: 360 Video, Microsoft Teams



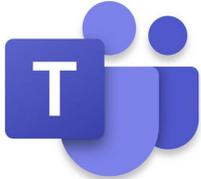
Microsoft Teams interface showing a search bar at the top and a sidebar on the left with navigation options: Activity, Chat, Teams, Assignments, Calendar, Calls, and Files.

The main content area displays a post from the "In the News" section. The post is titled "ULINK - Move aside problematic coastal structures! Our next U-LINK Phase I team will innovate the next generation of coastal design – which will be sustainable..." and includes a link to a Facebook post. The post is dated May 6, 2019.

Below this post is another post by Sobczak, James, dated 5/3/19 10:22 AM. The post is titled "This machine turns beer bottles into sand in an effort to save the world's beaches" and includes a link to a CNBC video. The post is dated September 25, 2019.

Below this post is a third post by Sobczak, James, dated 9/25/19 3:00 PM. The post is titled "America's Great Climate Exodus Is Starting in the Florida Keys" and includes a link to a Bloomberg news article. The post is dated September 25, 2019.

The sidebar on the left shows a list of teams and documents. The "In the News" section is currently selected, and the list includes: Richter - LRS, ULINK - Coastal Structures, General, Highway Shark (aka Fun Stuff), Agendas, Artists, Blog Posts, Building Materials, Community Engagement, CVs, Documentation, Events, Field Trips, Funding and Grants, In the News, Meeting Minutes, Physical Models, Proposal, Publications and Presentations, Research, Survey, and UML AI.





## **My Development as a Librarian through U-LINK**

- Directly engage with faculty and researchers in my liaison subjects
- Helps me be a more informed subject librarian
- Training in the “Science of Team Science”
- Opportunities (like this presentation) to promote librarians as collaborative partners



## Lessons Learned

- The is not “one best way” to be a U-LINK librarian
  - Each team dynamic is different, and each team has different needs
- Put yourself out there and try things
  - Faculty might not know what you can contribute, so show them
- Realize that interdisciplinary science is difficult
  - Do not take a slow progress or failure as a personal insult to your ability



# Assessment

Using annual surveys and focus groups with U-LINK librarians, we have sought to answer these key questions:

- What roles do librarians play on the teams?
- How do the teams benefit from the involvement of librarians?
- What are the challenges or barriers to librarian involvement on the teams?
- How can the library better support librarians in these emerging roles?



## **Findings: Key Roles and Contributions**

Librarians contribute to interdisciplinary research teams primarily by:

- finding and accessing information resources across disciplines,
- connecting teams to experts and resources, and
- improving collaboration and communication strategies.



## **Findings: Challenges and Barriers to Librarian Involvement**

- Level of inclusion and involvement
- Lack of clear expectations
- Rewards and compensation
- Lack of librarian confidence
- Leadership changes in higher administration

# U-LINK Librarians

## Partnering with You to Advance Interdisciplinary Research

As U-LINK librarians, we tailor our roles and activities to the needs of our team and the unique expertise and experience we each bring. We contribute by providing:

- **Information Access and Management**  
We help you find, access, and manage scholarly publications, data sets, etc.
- **Connections to Expertise**  
We connect you to people in the library, on campus and in the community with relevant skills and knowledge.
- **Team Collaboration Strategies**  
We advise you on collaboration tools and technologies and facilitate access to space for team meetings.
- **Team Communication Strategies**  
We offer neutral perspective, insights, and strategies for effective team communication.

In conversation with us, you may discover more points of connection and opportunities to address your team's research needs. We look forward to working with you!



"I connected my team to new community stakeholders."

*Angela Clark, Librarian  
for Marine and  
Atmospheric Sciences*



"I identified and managed project collaboration software for my team."

*James Sobczak,  
Librarian for STEM*



"I contributed to my team by conducting extensive literature searches."

*Lisa Baker, Librarian for  
International Studies and  
Political Science*



## **Emerging Roles: Librarians as Integration Specialists or Cultural Translators**

Librarians may be evolving into “integration specialists,” helping teams address their most challenging problems:

- managing large teams,
- navigating communication with other team members, and
- finding a common language.

Another term that may be applicable is “cultural translator.”



## Faculty Perspective on U-LINK Librarians

*“The librarian has gotten more and more involved in team activities over time - initially it was more of a “just” librarian role, but right now its closer to a full team member....”*

*“I think they are very important members of the team. The key is to have involvement from the start - to consider them as essential team members, not just an outside resource. With the **right match** with a team, they can add considerably to the cognitive diversity of a team.”*

*“The librarian could research practices on conducting multidisciplinary research or **help with bridging the gaps between the skill sets of the team members.**”*

*“Our librarian has been very engaged in editing and revising texts, which is really helpful at this moment when we are trying to pull a few different papers together. In a sense, he **acts as the only true non-disciplinary character, which is really helpful in honing in on language that effectively crosses those boundaries....**”*

*“**It was a stroke of genius involving the librarians in U-LINK, highly successful, and a program that should be nurtured, continued, and expanded.**”*



## Growth and Development

Investments on the following are needed to sustain future partnership:

- Clarifying the roles of the librarians on Interdisciplinary research teams
- Supporting professional development and scholarship in the area of Interdisciplinary research teams / **Science of Team Science field**
- Finding the "**right match**"
- Being conscious of institutional and structural barriers



Attending their second Team Science Workshop, the School of Architecture's Joanna Lombard, left, and the Rosenstiel School's Amy Clement discuss their U-LINK team's Phase II project on hyper-local adaptations to climate change.

*Photos: Evan Garcia/University of Miami*

By Maya Bell

01-14-2020

# Pioneering librarians shine in their U-LINK roles



## Next Steps

- Connecting with the new Vice Provost for Research, Dr. Erin Kobetz, to develop the next iteration of the U-LINK program
- Supporting U-LINK “Social Equity” grants in 2020-2021 in response to the call for racial justice. Librarians are serving as:
  - application reviewers
  - embedded librarians
  - participants in “Research Sprints” focused on team challenges
- Revising our plans for a Faculty Research Commons in light of lessons learned



## Connect with Us

Questions? Ideas? Please reach out to us:

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**James Sobczak**

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