

“Approved Workers” — II Timothy 2:15

# DOKIMO I ERGATAI

FALL 2018

## BUILDING CONNECTION IN ISOLATION: TRANSFORMATION FOR THE RAMA



By Sara Mammano '19



*The Collaboratory site team partnered with the Rama people to construct a bridge over a swamp to the mainland. The finished structure, pictured on right, allows the Rama people to move off of an overcrowded island.*


**In accordance with the Collaboratory's vision** to transform lives through innovation and service, the Nicaragua Bridge Project partnered with Friends in Action to construct a bridge for an isolated people group.

The Rama, an indigenous people group living off the Eastern coast of Nicaragua, have a large portion of their community living on an overcrowded island. Collaboratory site teams constructed a bridge over a swamp on the mainland to allow people to move off of the dangerous island. The finished bridge on the mainland gives the Rama people access to baseball fields, ministry buildings and future medical facilities.

From conception to implementation, this project significantly impacted the site team and the Rama people. Throughout the five-week construction process, site team members were impressed with the engagement from the Rama people. “The key was the way the community came out and embraced this [project],” states Doug

Flemmens, director of the Collaboratory.

He recounts a story from his time in Nicaragua when a group of 30 Rama people decided to continue building the bridge, despite a recent site team departure. Large numbers of community members came out to help pour concrete bucket by bucket, until they finished the foundation. Flemmens explains how the Rama people took ownership, “It didn’t feel like we were doing a project for them, it felt like we were helping them with their project.”

Student Project Manager Caleb Comeaux states, “Every other bridge is specifically about access, but there was so much more of a holistic vision with this bridge. It emphasized the fact that we are not just meeting one specific need, it was about building a community.” Comeaux and the team saw that transformation is not based on a physical deliverable, it comes through relationships. 



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THE COLLABORATORY FOR  
STRATEGIC PARTNERSHIPS AND  
APPLIED RESEARCH

## WORD FROM THE PROGRAM MANAGER

### MISSION

The Collaboratory is a center at Messiah College for applied research and project-based learning, in partnership with client nonprofit organizations, businesses, governments and communities in our region and around the world. Areas of engagement include science, engineering, health, information technology, business and education. Our two-fold mission is:

- To foster justice, empower the poor, promote peace and care for the earth through applications of our academic and professional disciplines
- To increase the academic and professional abilities of participants, their vocational vision for lifelong servant-leadership and their courage to act on convictions

### VISION

Increasing hope and transforming lives through education, collaboration, innovation and service.

### IDENTITY

The Collaboratory is an organization of students, educators and professionals affiliated with Messiah College. We are Christians who aspire to obey the instructions of our Lord and Savior Jesus Christ, to love neighbors as ourselves and to share his Gospel. As God enables us to serve others today, we seek to grow as disciples of our Lord and Savior Jesus Christ, to serve as God's stewards over the resources of our academic disciplines and to bear witness to the good news of the Kingdom of God.

### STUDENT STAFF

STUDENT DIRECTOR: Lily Gaudreau

ASSISTANT STUDENT DIRECTOR: Erin Brenneman

STUDENT PROGRAM MANAGER: Wei Yee Ng

STUDENT ADMINISTRATIVE ASSISTANT: Mik Fenn

### PROFESSIONAL STAFF:

DIRECTOR: Doug Flemmens

ENGINEERING PROJECT MANAGER: Dereck Plante

PROGRAM MANAGER: Lori Zimmerman

ADMINISTRATIVE ASSISTANT: Shannon Walker

### STAY CONNECTED

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## LORI ZIMMERMAN



**My home recently went through a major transformation.** The original portion of the house was covered in two-tone green siding, and I have hated the mismatched exterior for the eleven years we have lived here. Our recent renovation changed the outside of the house, but the interior remained the same. To experience the change, I have to go outside to see it.

In the Collaboratory, we always talk about transformation, both in our lives and in the lives of others. This fall, there are approximately 200 Messiah College students participating in 32 Collaboratory projects that serve local and global partners.

Project members are encouraged to focus on how they can invest in each other and their partners both relationally and spiritually. I pray that those who are involved in the Collaboratory get a chance to experience real transformation—not like that of my house, but from the inside out—as we learn, grow, share and serve. 🏠



## COLLABORATORY LEADERSHIP WORKSHOP

### 53 students returned to campus

prior to fall semester to prepare for their leadership roles in the Collaboratory. 🏠

## COLLABORATORY SECTOR TAGS

The chart below serves to familiarize you with each of the different sector tags. You'll notice the sector tags used throughout the newsletter; each tag indicates areas of academic disciplines applied to each project.



**Advancement:**  
Promoting and enhancing Collaboratory operations



**Economic Empowerment:**  
Fostering economic development



**Infrastructure:**  
Developing structures to advance communities



**Biomedical:**  
Innovating medical technologies



**Education:**  
Empowering lives through academic engagement



**Sustainability:**  
Caring for the earth



**Communications Technology:**  
Designing systems to foster communication



**Energy:**  
Implementing renewable energy technologies



**Transportation:**  
Simplifying transportation to combat global complexity



**Disability Resources:**  
Empowering persons with physical disabilities



**Health:**  
Advancing healthy communities



**Water:**  
Facilitating sustainable water solutions

## HIGHLIGHTS

### ALUMNI COMMIT THEIR LIVES TO INTERNATIONAL SERVICE



By Leanne Tan '21

**The Collaboratory has transformed the lives of thousands of people around the world,** including Dale '00 and Florence (Bomberger) '00 Johnson. The Johnsons joined shortly after the organization was formed. Their Collaboratory experience was a contributing factor to their decision to commit their lives to full-time Christian service.

During their time at Messiah College, they actively participated in Collaboratory projects and site team trips to Burkina Faso. Following graduation, they returned to serve as advisors.

"God was working in our hearts in several ways," Dale says. "We would certainly say that our time at the Collaboratory served to confirm God's call and keep us motivated and excited about going into the mission field."

In July 2007, the Johnsons partnered with Serving in Mission (SIM) and went to Burkina Faso, where they stayed for about 10 years.

For the first six years, the Johnsons

were based in Mahadaga, the birthplace of the first Collaboratory overseas partnership. Dale served as the administrative director for the Center for the Advancement of the Handicapped, while Florence ran SIM's mission station, mentored short-term missionaries and home-schooled their two sons, Caleb and Joel. Following this, they relocated to the capital of Ouagadougou, where they served on the administrative team for SIM.

The Johnsons came back to the U.S. in December 2017, expecting to return to Burkina Faso the following August. However, they decided to stay in the States.


"One of the primary reasons we stayed was that we didn't have clear ministry roles to return to in Burkina," Dale says.

Currently, Dale is working with HOPE International in Lancaster, while Florence is working for the personnel department of SIM USA. They are grateful to be able to serve God in overseas mission contexts, even though they are living in the U.S.

"Sometimes it's hard to be back in the States and not on the front lines," Dale



recalls. "But we believe that we can continue to serve God with our lives and that He has a plan for us."

Dale's advice for all students in the Collaboratory is to fully entrust themselves to God's plan. "It may not lead you overseas. You might even [...] sit behind a desk in Pennsylvania, but serving God has so many rewards." 

### BASIC UTILITY FIRE TRUCK


By Hannah Beairsto '20

**Small fire trucks will make a big impact in rural Kenya and Tanzania, thanks to Will Austin, the Institute for Affordable Transportation (IAT) and the Collaboratory.** IAT manufactures lightweight, three-wheel vehicles for use in rural communities. The Collaboratory's Basic Utility Vehicle (BUV) team designs an attachment to turn this motorcycle-like vehicle into a functioning fire truck.

One of the biggest challenges in designing the attachment was finding the right pump for the job. The team selected an agricultural pump, making the BUV quite versatile whether it's "helping with irrigation, transporting water or pumping out something that's flooded," says Jacob Film, student project manager. "We want it to be a

practical, everyday thing."

The fire truck will help improve the lives of the community. And, naturally, a firefighting vehicle will impact rural towns, who "have no ways to protect themselves in the event of fire," says Don Waardenburg, project manager. "A single spark can spread and burn down a village."

After continued testing at the end of spring 2018, they found the pump a functional success. The next step is designing multiple fittings for different hoses, making the attachment capable of firefighting or irrigation. The team is excited about their continued work and final product that will hopefully save lives. 





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## STUDENT VOICES

*Interviewed by Autumn Bank '19 and Mary Roberts '19*

### How has the Collaboratory transformed you?



#### **Helen Wiley '20**

*Major: Mechanical engineering  
Project: Sustainable Mobility*

"When I was looking at colleges, I was immediately drawn to Messiah because of the Collaboratory. I was not 100% confident I wanted to be an engineer, but I was confident that the goal of the Collaboratory aligned with how I wanted to live my life. Throughout my time here so far, I have affirmed my career path as an engineer but also have been able to grow and learn what it means to be a Christian engineer."



#### **Cole Reed '20**

*Major: Business administration  
Project: Economic Empowerment*

"Before joining the Collaboratory, I was a business major and didn't know what I wanted to do with my life. When I joined, I discovered the world of microfinance and the world of poverty alleviation through business. It pushed me toward finding my calling for the rest of my life. Most of what I do at Messiah revolves around microfinance and economic empowerment."

#### **Jacob Film '19**

*Major: Mechanical engineering  
Project: Basic Utility Vehicle*

"When I came to Messiah, I hadn't considered doing anything service-related. Working in the Collaboratory has changed



my perspective. I know the type of career I'm looking for has definitely been shaped by being involved in the Collaboratory. I want to

do something that's directly impacting people and where I can see the difference it's making in people's lives."



#### **Steven Carpenter '19**

*Major: Electrical engineering and computer science  
Project: Solar PV*

"The Collaboratory has helped me see what it looks like to be an engineer in the mission field and also what it looks like to be an engineer with good principles, a strong work ethic, and leadership abilities."

## STAY CONNECTED:

For regular updates and inside stories, follow us on these social media sites! We would love to hear your Collaboratory story.



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