

# Citing the Lack of Diversity In STEM, SGA Founder Dr. Calvin Mackie Calls for a New Approach to Advance STEM Education

*Dr. Mackie, a leading STEM educator, warns of consequences for communities of color if there is not more diversity among STEM professionals*

MINNEAPOLIS, MN, UNITED STATES,

May 2, 2023 /EINPresswire.com/ --

Speaking to medical engineers at the University of Minnesota Institute for Engineering in Medicine, Dr. Calvin

Mackie warned conference attendees that America must diversify science, technology, engineering, and math (STEM) fields to ensure that technological advances can benefit populations of color.

**STEM**  
GLOBAL ACTION  
inform • engage • inspire



“

We've created an intentional, consistent, and relevant community-based STEM engagement program that's transferrable, scalable, reproducible, and, more importantly, sustainable.”

*Dr. Calvin Mackie*

Calling STEM a “life or death” issue, Dr. Mackie urged medical engineers to help bring more diversity to STEM fields by changing the approach to STEM education.

“Some people sitting here right now say, ‘Look, we are engineers, and we make stuff,’” Dr. Mackie told hundreds gathered for the Institute’s Innovation Week conference. “What does that have to do with diversity? Anybody can make a medical device, and they work on everybody else. Well, you know what, that isn't the truth.”

For example, Dr. Mackie, an award-winning mentor, inventor, author, and former engineering professor, said that technology inexplicably hasn’t always worked on people of color. He noted that the U.S. Food and Drug Administration (FDA) acknowledged that pulse oximeters, a fingertip device that estimates blood oxygen levels, must improve because pulse oximeters are less accurate on individuals with darker skin pigmentations.

Further, Dr. Mackie added that there is a growing recognition that racism is deeply embedded in

clinical algorithms that assess everything from kidney functions to determining pain thresholds. In New York City, Dr. Michelle Morse, a Black physician, deputy commissioner, and chief medical officer at the New York City Department of Health, leads a Coalition to End Racism in Clinical Algorithm.

Dr. Mackie also criticized the lack of clinical trials of sickle cell disease treatments, even though it is the most common genetic disorder in the country, with 100,000 people affected, according to <https://www.statnews.com/2022/12/21/realign-moral-compass-sickle-cell-disease/>. As scientists prepare for possible trials of CRISPR, which might address sickle cell, Dr. Mackie has been concerned about ethical questions surrounding gene altering.

Dr. Mackie believes having more Black and Brown STEM experts working on these issues would help ease the concerns. Moreover, he discussed his successful approach to advancing STEM education. Over the last ten years, he has impacted over 125,000 K-12 students, 20,000 families, and 5,100 schools across the U.S. and five countries.

In 2013, Dr. Mackie created [STEM NOLA](#), a non-profit organization based in New Orleans. He implemented a community engagement model that helps all children, especially those from low-resourced communities, overcome challenges and barriers that prevent them from accessing STEM learning programs.

Through years of work, Dr. Mackie understands that early and ongoing exposure to STEM concepts in a rigorous, culturally relevant environment is critical to unlocking opportunities that STEM careers uniquely provide. Dr. Mackie's approach features paid programmatic staff, college and professional volunteers, hands-on learning opportunities, and a culture of excellence, which translates into a high-quality mechanism for tackling real-world challenges and fostering the self-agency of participants. This methodology supports long-term engagement and ongoing mentoring for regular program participants.

Working with local companies, non-profits, and educators, Dr. Mackie holds STEM FESTs in communities across the country, where K-12 students and their parents engage in STEM activities, such as operating robots, building and operating model cars, constructing flying drones, watching sheep heart dissections, and much more. There are 60 different stations in these vast, tradeshow-like events where kids engage in STEM activities.

In 2021, Dr. Mackie launched [STEM Global Action](#) (SGA) to advance K-12 STEM education



Dr. Calvin Mackie

programs in more locations across the U.S. STEM NOLA is the flagship affiliate; others have been started in places like Mobile, Alabama, Camden, New Jersey, and throughout Louisiana.

“Our kids must have skills to create and to innovate, to (excel) in the 21st century,” Dr. Mackie said. “And that's why exposure to STEM is so important. It can't start in middle school or high school, or college. It has to start at four and five years old. So it becomes a part of the lexicon and becomes a part of their DNA. We've created what we think is the AAU of STEM. We are finding genius kids from cradle to career and then putting them on a pathway (to STEM careers).”

Dr. Mackie said going into communities and exposing people to STEM is critical. “We know STEM leaders are going to change the world. We've created an intentional, consistent, and relevant community-based STEM engagement program that's transferrable, scalable, reproducible, and, more importantly, sustainable.”

He discussed the consequences for America and Black and Brown youth if the nation doesn't change its approach to STEM education.

“We live in a country right now that makes sure every Black and Brown boy touches a football before the age of four,” he said. “And no one questions that in the 21st century. Our children will only have three options. Either they will take something, break something, or make something. And if we don't give them the skills, education, and motivation to make something, that will only leave them with the two options we see on the news every night.”

#### ABOUT STEM GLOBAL ACTION

In 2013, Dr. Calvin Mackie founded STEM NOLA, a New Orleans-based non-profit committed to expanding STEM education at churches, community centers, and schools, particularly in communities of color. His goal is to make STEM education available in ALL communities. In July 2021, Dr. Mackie launched STEM Global Action, a campaign, and network of affiliates, including STEM NOLA, that pursues STEM education for children, parents, and communities across the U.S. and abroad. His initiatives have impacted over 125,000 students, 20,000 families, and 5,100 schools across the U.S. and five other countries. In addition to an informative website with a data center, newsroom, and newsletter, Dr. Mackie hosts the Let's Talk STEM with Dr. Calvin Mackie [podcast series](#). It features interviews with guests from all aspects of STEM – entrepreneurs, educators, corporate leaders, and students.

Michael K. Frisby

Frisby & Associates

+1 240-988-9791

[mike@frisbyassociates.com](mailto:mike@frisbyassociates.com)

Visit us on social media:

[Facebook](#)

[LinkedIn](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/631406494>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2023 Newsmatics Inc. All Right Reserved.