

TWITCH AND SHOUT

Engineering hype man “Dr. Nee” extols the fun of the field, one livestream at a time.

Months after a container ship struck Baltimore’s Key Bridge in the middle of an otherwise tranquil night, Nehemiah “Dr. Nee” Mabry, PE, a bridge-design engineer, began discussing lessons learned on the livestreaming platform Twitch.

When audio issues arose with his guest, a transportation engineer, Mabry turned the challenge into another educational opportunity, highlighting how disasters offer reset opportunities. As he and his team troubleshoot live, the host deftly maintained the conversation on video and with viewers in the chat. Throughout, Mabry displayed his characteristic cheerfulness. Speaking of the glitching sound, he quipped, “At least there’s a steady tempo. There’s a nice beat to it.”

Throughout his life, Mabry has seen opportunity in tragedy. When he was seven years old, his childhood home caught fire. The experience taught him resilience. After seeing the house reduced to ash and debris (and finding his baseball-trophy toppers melted into yoga poses), Mabry learned a lesson that still guides him: turning crisis into opportunity requires new ways of seeing, thinking, and responding. And a whole lot of positivity.

Such is the ethos of *Building Stuff with NOVA*, a science- and engineering-focused livestream on Twitch, known for live gaming and user interaction. The show features expert interviews, interactive games, and virtual field trips.

Since partnering with public media creator GBH, Mabry has taken a decidedly upbeat yet pedagogical approach as the show’s host and creative tour de force. Even when the topic is esoteric or the news negative, Mabry provides easy-to-grasp and hopeful insights.

His gregarious personality and childlike wonder for engineering make him the model partner for GBH and its science show NOVA. The product of their collaboration is more accessible (and fun) science-based programming.

The goal is to “create an inclusive, interactive, informal environment where



Courtesy of GBH/NOVA

Mabry talks with STEM immersive experience designer Karmisha Reeb on his Twitch livestream.

engineering education takes place outside the classroom,” Mabry tells *Prism*. “Let’s play games, let’s talk about what’s happening in the news, let’s talk to interesting guests. Let’s lower the ... intimidation of what people perceive as being involved in engineering.”

During Mabry’s childhood, television shows like *Bill Nye the Science Guy* and *Dexter’s Laboratory* inspired him to both become an engineer and similarly demystify the field for others. While completing his doctorate in 2012, he launched STEMedia Inc. to produce accessible educational and entertainment content. He continues to serve as CEO.

As part of the *Building Stuff* initiative, NOVA is collaborating with social science researchers to examine how livestreaming platforms like Twitch can help drive engagement and learning in STEM. The project, supported by the National Science Foundation, will home in on how the platform affects both learning outcomes and sense of belonging for individuals who have been historically underrepresented in engineering spaces.

“A lot of education and sharing of information happens naturally and organically [on Twitch],” Mabry notes. “It’s live and available to anyone with an internet connection.”

Building Stuff with NOVA streams to Twitch every weekday, with select episodes also broadcast on YouTube, Facebook, and TikTok. Across these platforms, the show has been viewed over 200,000 times, according to GBH. Scheduled for the end of October is an engineering-themed escape room built in GBH’s studio in Boston, in which the online audience will work with “IRL” (in real life) players as they try to escape. The Twitch stream will culminate in November with the three-part NOVA series on PBS, *Building Stuff*, in which Mabry will appear as an engineering expert.

Closing his livestream about the Key Bridge, Mabry drew a connection between his own tragedy and the bridge collapse. Although their house burned down, the family’s backyard shed where Mabry kept his LEGO sets survived. He lost everything but the objects that would help him become an engineer.

“For whatever goes wrong for you,” he emphasized, “in that, there’s something that remains ... a lesson to be learned that allows you to build something back, not just where it was, but better.”

Paul Barbagallo is a freelance writer based in Boston. He has served as a reporter and editor for such media outlets as Bloomberg Businessweek, US News & World Report, and ADWEEK.