

## Health and Government Operations Committee

### HOUSE BILL 999

#### Workgroup on Establishing a Science and Technology Best Practices and Innovation Network

March 28, 2024

Chair Pena-Melnyk, Vice Chair Cullison, and committee members, my name is Tim Finin, and I am pleased to be able to testify in support of House Bill 0999, introduced by Delegates Hill, Crutchfield, Guzzone, Kaiser, Qi, Ruth, and Wu. The passage of this bill will reflect leadership in the country-wide efforts addressing the societal impacts of using advanced technology such as quantum computing, cloud computing, big data and machine learning, secure systems, and artificial intelligence., especially in government.

I am a professor in UMBC's Computer Science and Electrical Engineering department and the head of the [UMBC AI Center](#). I have also held positions at Unisys, the University of Pennsylvania, Johns Hopkins University, and the MIT AI Laboratory. I have over 50 years of experience teaching computer science and conducting research on applying the latest computing technologies to problems in information systems, cybersecurity, healthcare, and artificial intelligence.

This testimony was written jointly with Vandana Janeja, Professor of Information Systems and Associate Dean for Research and Faculty Development at the College of Engineering and Information Technology (COEIT) at UMBC. She has been an educator and researcher in data analytics for over 16 years. She has co-authored community reports for the National Science Foundation and co-organized a workshop on embedding ethics in data science pedagogy. She has also served as an AAAS Science Technology Policy fellow and a data science expert at NSF in the Computer Information Science and Engineering Directorate's Office of the Assistant Director.

We are in a pivotal moment characterized by unprecedented breakthroughs in many domains, such as artificial intelligence, cloud computing, semiconductor technology, gene editing, developing RNA vaccines, and renewable energy systems. We present this testimony supporting the proposed bill to establish best practices in science and technology and create a robust **innovation network**. As experts in our fields, we believe HB 999 is critical during rapid technological changes. Such a network will support our societal advancement and provide thoughtful dialog around establishing guardrails where needed in advancing sound science, innovation, and best practices.

Technology, such as the Internet, intelligent IoT devices, and increasingly powerful AI systems, will continue to impact our society significantly, positively and negatively. We must understand how to maximize their positive aspects while minimizing or eliminating

the negative. We must remember that since no one will know everything, we need groups with appropriate and diverse expertise to evaluate the impacts of using these and other advanced technologies and to predict how they will evolve.

In this testimony, we want to emphasize the need for a network of experts to look at the emerging solutions and threats technology may pose to government systems and Maryland citizens. Fortunately, our state universities, like UMBC, have significant expertise in critical technologies. For example, UMBC researchers have led the way in applying artificial intelligence to many critical areas, such as climate change, healthcare systems, cybersecurity, language understanding, image understanding, and robotics.

Our faculty members do groundbreaking research through selective programs funded by federal and state agencies and industry partners in these areas of state and national importance. Within the COEIT, nine advanced research centers employ 100s of faculty, students, and researchers focusing on some of these critical areas. In addition, our faculty have received many coveted NSF CAREER awards in areas such as responsible AI, robotics, and large language models for scientific discovery. This research has often been done in collaboration with other universities, large and small companies, and government agencies based in Maryland.

Establishing the innovation network will allow for such unique expertise to be at the fingertips of the state to consult with and bring to bear when the legislature is considering vital decisions that impact the citizens and stakeholders. For example, as legislators develop new legislation incorporating the latest technologies, this network can bring the right experts into the mix to identify and evaluate the challenges the public and stakeholders face.

We are at the crossroads of pervasive use of advanced technologies. For example, not a day goes by when we don't hear about a company integrating AI capability into their applications, websites, or businesses. The same will permeate the state government as well. The critical thing at this point is to understand the implications of the novel technologies for all users and implementers. Since not everyone will be familiar with upcoming technology developments, an innovation network can help establish guardrails and a way of thinking ethically and responsibly. It can also support advancing new technologies to make systems more efficient.

The innovation network proposed in this bill can support understanding the many new technologies being proposed and adopted across businesses, hospitals, schools, and state operations. In this era of technological advancement, expertise can sometimes be a phone call away with this network.

Thank you for your favorable consideration of House Bill 999.