Chinese physicians from the Song Dynasty in China (1027) used a bronze statue with acupuncture points to imitate the human body.

It may be one of the first known examples of healthcare simulation, and it continues to serve as an inspiration for Dr. Yue Dong, who is the founding chair of the Healthcare Systems Modeling and Simulation Affinity Group for SSH. He is also a co-chair of the IMSH 2019 Planning Committee.

Dr. Dong is native Chinese and came to the United States in 2000. He is a Patient Safety and Healthcare Delivery Researcher at the Mayo Clinic Department of Anesthesiology and Multidisciplinary Epidemiology and Translational Research in Intensive Care (METRIC) in Rochester, MN.

“The world is much more complicated than we thought,” Dr. Dong says. “The practice of healthcare needs to change to adopt the fast-changing nature of people, technology and society. In addition to training clinicians, we need to understand more about how human beings perform in a very complex healthcare environment.”

“Medicine has historically been using a reductionism approach to evaluate disease and treatment. But because of the complexity of modern society and advancement of medicine over last 150 years, we make a lot of assumptions and ignore the complexity. This approach changed with the great advancement of computer and information technology; computer simulation has the predictive capability to complement the traditional pillars of theory and to advance the science.”

“The world is changing very, very fast. Healthcare has to be responsive to those changes. We just cannot have the same mindset that we've had for many years. Simulation allows us to test new ideas faster; you can fail early, and you can fail cheaply.”
“Simulation is an innovation platform, it has many novel applications to design new medications on a molecular level, to learn procedures as a team, as well as improve the hospital operations efficiency. Just like we learned the simulation training from the aviation industries, we can learn from many other industries (and companies such as Disney and Tesla) that are using computer simulation to design new solutions with the ultimate goal of safe, high quality and lower cost healthcare delivery.”

He notes that the theme of IMSH next year is Redefining and Redesigning; Healthcare Powered by Simulation.

That theme resonates because while doctors from the Song Dynasty may not have been able to imagine computers, virtual reality or sensors, but they were clearly able to see the value in learning from a simulated environment.