



## System Modeling & Simulation Education and Research

**SYSTEM  
MODELING  
AND  
SIMULATION**

The University of Houston (UH) System Modeling and Simulation (SMS) program is sponsored by U.S. Department of Education Grant P116S230007. The goal is to promote SMS education and research at UH. We will offer SMS Certificates to Graduate and Undergraduate students



U.S. Department of Education

# OUR TEAM



**Dr. Weihang Zhu**  
Principal Investigator  
wzhu13@uh.edu, 713-743-6980



**Dr. Suresh Khator**  
Sr. Associate Dean, Engineering  
skhator@uh.edu, 713-743-4205



**Dr. Ying Lin**  
Industrial Engineering



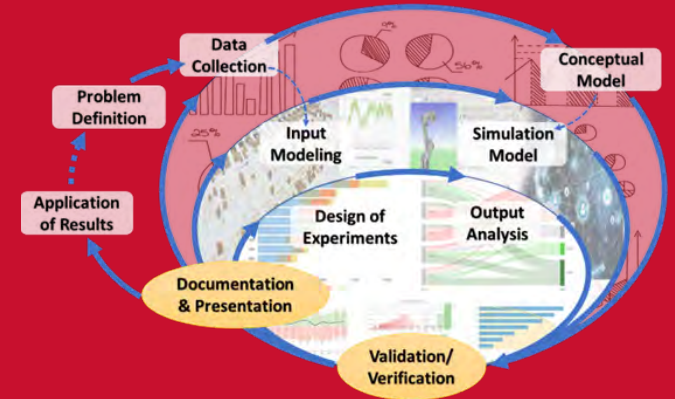
**Dr. Paige Evans**  
Co-Director, teachHOUSTON



**Dr. Tomika Greer**  
Human Resource Development

**For more information:**  
<https://coss.egr.uh.edu/sms/>

**University of Houston**  
Houston, Texas 77204



## Certificate Program in System Modeling and Simulation

*U.S. Department of Education*



# SMS Certificate

## For UH students

University of Houston will offer Graduate and Undergraduate SMS Certificates to students who completed four of the six listed courses.

### *Undergraduate Courses:*

- **INDE 2333 Probability and Statistics**
  - INDE 3382 Stochastic Models
- **INDE 4370 Discrete Event Simulation**
- **INDE 4364 Big Data and Analytics**
- **INDE 4397 ST: Simulation Optimization**
- **INDE 4397 ST: VR and Digital Twins**

### *Graduate Courses:*

- **INDE 6333 Probability and Statistics**
  - INDE 6370 Digital Simulation
  - INDE 6360 Data Analytics
- **INDE 6361 Production Planning & Scheduling**
- **INDE 6397 ST: Simulation Optimization**
- **INDE 6397 ST: VR and Digital Twins**



### Selected SMS Research Topics:

- Discrete event simulation
- Agent based modeling
- Monte Carlo simulation
- Digital twin
- Cyber-physical systems
- Uncertainty quantification
- Stochastic modeling

## Research Activities

## Quote



"The simulation course I took at the University of Houston has been instrumental in my work as a Sr. Material Flow Optimization Engineer at Amazon. The skills and knowledge I gained from that course have allowed me to use simulation to improve the flow of material through sort centers and optimize process paths. Simulation has also facilitated running 'what-if' scenarios to help drive important business decisions." - Adil Malik, Sr. Material Flow Optimization Engineer at Amazon

More  
Details?



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Sign up  
Today

### *Undergraduate Research Positions Available!*

- Each summer there are five undergraduate research positions available for the three summer months. You will work with professors to gain experience in system modeling and simulation!

### Where are SMS experts working?

- Amazon, Tesla, Uber, MD Anderson Cancer Center, Texas Children's Hospital, Harris Health, and many other industries

