

# The Hong Kong University of Science and Technology

Dept of Information Systems, Business Statistics  
and Operations Management  
Zoom Webinar Announcement



## A New Framework for New Venture Creation by Mr Zhengli Wang

Department of Operations, Information and Technology  
Stanford Graduate School of Business

<b>Date</b>	:	<b>20 November 2020 (Friday)</b>
<b>Time</b>	:	<b>2:00 - 3:30 pm</b>
<b>Venue</b>	:	<b>Online via Zoom</b>

### Abstract:

We model the creation of a new venture with a novel drift-variance diffusion control framework in which the state of the venture is captured by a diffusion process. The entrepreneur creating the venture chooses costly controls, which determine both the drift and the variance of the process. When the process reaches an upper boundary, the venture succeeds and the entrepreneur receives a reward. When the process reaches a lower boundary, the venture fails. The entrepreneur can choose between two different controls and wishes to determine the policy that maximizes the expected total reward minus total cost. We derive closed-form expressions under which the optimal policy will be dynamic versus static. The results reveal a subtle trade-off between the cost of the two controls, their drift and their variances.

### Biography:

Zhengli Wang is currently a PhD student in Operations, Information and Technology at Stanford Graduate School of Business. His past research has focused on methodologies such as stochastic modeling, data-driven modeling, machine learning algorithms, data analytics and simulation, with applications in Entrepreneurship and Healthcare.

All interested are welcome!  
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