香港浸會大學
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DEPARTMENT OF
COMPUTER SCIENCE
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SEMINAR

2025 SERIES

Towards Realistic Cloth Modeling

DATE & TIME

4 FEB 2025 (TUE) 4:00 – 5:00 PM

ONLINE VIA ZOOM

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ABSTRACT

The digitization of 3D objects is an essential aspect of the emerging digital era, with broad applications spanning gaming, film, VR/AR, and robotics. While significant progress has been made in modeling rigid and articulated objects, such as the human body, accurately modeling deformable objects remains a challenging problem. This talk focuses on my efforts to address this challenge, with a particular emphasis on clothing – an ideal representative due to its ubiquity and the complexity it presents in our daily interactions.

Current approaches, relying on either explicit or implicit representations, struggle to effectively capture the intricate properties of cloth, including its thin structures, large deformations, and diverse styles. In this talk, I will introduce a novel implicit representation inspired by industry practices: Implicit Sewing Patterns (ISP). ISP can generate high-quality cloth meshes, adapt to complex multi-layered draping, and support intuitive editing of cloth texture and shape, making it a powerful and flexible model for cloth representation. To further demonstrate ISP's potential, I will discuss its applications in reconstructing both on-body cloth as well as cloth under manipulation, such as folding and flattening. These works represent a significant step toward more realistic and immersive 3D modeling and open new possibilities for enhancing spatial intelligence and advancing digital design.

SPEAKER'S BIOGRAPHY

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