



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

PhD Student Seminar

Trace NFT Impact Dynamics in the Substitutive System with Visual Analytics

By

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Abstract

Impact dynamics are crucial for estimating the growth patterns of NFT projects by tracking the diffusion and decay of their relative appeal among stakeholders. Machine learning methods for impact dynamics analysis are incomprehensible and rigid in terms of their interpretability and transparency, whilst stakeholders require interactive tools for informed decision-making. Nevertheless, developing such a tool is challenging due to the substantial, heterogeneous NFT transaction data and requirements for flexible, customized interactions. To this end, we integrate intuitive visualizations with advanced machine learning models to unveil the impact dynamics of NFT projects. We first conducted a formative study and summarize analysis criteria, including substitution mechanisms, impact attributes, and design requirements from stakeholders. Next, we proposed the *Minimal Substitution Model* to stimulate the substitutive system of NFT projects that can be feasibly represented as node-link graphs. Finally, we developed a new multi-view visual analytics system, namely *NFTracer*, allowing interactive analysis of impact dynamics in NFT transactions.

Date : 12 May 2023 (Friday)

Time : 3:00 pm

Zoom : <https://hkust.zoom.us/j/93327522695> (Passcode: 666666)

All are Welcome!