DISSERTATION DEFENSE

Xiaohang (Flora) Feng

"First Impression: informative visual cues on digital platform"

Thursday, November 20, 2025
3:00pm
Tepper 5222

This dissertation shows how first impressions, via faces, image style, and at-a-glance informational signals, shape choice, prices, and market structure on digital platforms. I argue these cues are measurable, causal, and governable. The first study develops an explainable computer-vision method to score celebrity visual potential (CVP) from 11 facial features tied to charisma-related inferences. Trained on a large face corpus and validated in controlled experiments and field data (Instagram, LinkedIn), the model predicts celebrity status with high accuracy, aligns with human judgments, and adds signal beyond attractiveness or typicality. The second study quantifies visual uniqueness in peer-to-peer marketplaces using an unsupervised, psychology-guided representation of 481,747 listing images with multiple human validations (including eye tracking). Demand on Airbnb follows an inverted-U: moderate distinctiveness boosts bookings, while excessive distinctiveness backfires; gains are larger when hosts signal responsiveness and quality. The third study examines Amazon's Climate Pledge Friendly badge. A three-stage price–badging game and large-scale causal evidence show that a unified sustainability signal increases demand and prices and reduces market concentration under realistic consumer mixes. Overall, the dissertation delivers interpretable measures of glance-level cues, credible evidence of their market impact, and a managerial playbook that treats first-impression design as a tunable policy under clear ethical guardrails.