SCHOOL OF BUSINESS ADMINISTRATION
경영과학부

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Cities as Inverted Watersheds

Speaker: Prof. Lee, Seung Hoon(Yonsei University)

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Venue: 114-503

Abstract

This paper proposes a novel method to delineate cities and subcenters by treating them as mountains on a smoothed density surface of economic activity. Boundaries are identified using the watershed segmentation algorithm. The approach is simple, requiring only one global parameter, yet it outperforms traditional density-threshold methods. By adjusting this parameter, it can delineate entire cities or subcenters within them. The method is theoretically grounded and aligns with commuting-flow-based definitions but does not require commuting data. We apply it to delineate subcenters in the continental U.S. and global city boundaries from 1975 to 2020, revealing new empirical insights.

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