



UNIVERSAL PATTERNS IN URBAN STREET NETWORK FORM

Urban Evolution Morphology (UrEM)

WEBINAR



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Urban street networks shape accessibility, mobility, and urban resilience. Prior work has emphasized differences between cities' street network forms, but this talk argues that they actually exhibit remarkable universality across urban areas. **We model the street networks of every urban area in the world** and calculate street network form indicators. We then compare these indicators' statistical dispersion to that of other urban characteristics unrelated to network form. Despite vast differences in geography and planning history, **cities converge on a consistently narrow and homogeneous set of street network forms**—a phenomenon we do not see for city size and other urban characteristics. Street networks' geometric and topological forms show **remarkable universality—i.e., convergent homogeneity**—across cities of drastically different origins and planning paradigms, which we argue is due to physical constraints, urbanization processes, and optimization.

