

A series of studies on practical uses of downscaling simulation techniques for building and urban environmental issues

Satoru Iizuka

Associate Professor, Nagoya University

s.iizuka@nagoya-u.jp

This series of studies aims to develop downscaling simulation techniques from global scale to building scale and to make practical uses of the simulation techniques. The practical use targeted in this series of studies is mainly to investigate mitigation and adaptation measures in building and urban scales against global and urban warming problems. The development of such widespread and detailed downscaling simulation techniques is outstanding in the world. Moreover, the future projections of urban thermal and wind environments based on appropriate future scenarios conducted in this series of studies are the first attempt in the architectural and urban engineering fields. In particular, the future projections combined with disaster-mitigation/prevention urban structure scenarios, which were designed from the viewpoint of disaster-mitigation/prevention against a huge earthquake expected in the near future, are quite unique. The downscaling simulation techniques developed in this series of studies can be utilized not only to analyze/predict environmental issues but also to investigate building and urban planning strategies.