

Université Libre de Bruxelles

# Automated System Partitioning for Efficient 3D Circuit Integration

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Work presentation

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# Why

## Why do we want 3D IC

- Moore's Law falters
- Always more features for the same footprint

## When do we want it

By the end of the decade

## Who works on it

- Sung Kyu Lim, GTCAD lab, Georgia Tech
- George Karypis (METIS), University of Minnesota
- And more...

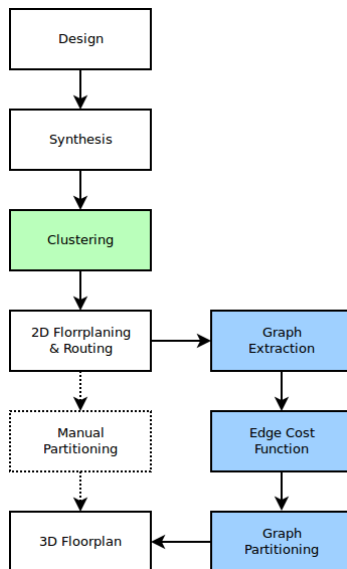
## Monolithic

- Lack of methodologies
- Thermal dissipation problems
- Manufacturing difficulties

## Stacked

- Base on 2D design
- Separate die manufacturing
- Die stacking

# Design flow



# Objectives

- Reduce interconnect length
- Reduce critical path length
- Reduce interconnect amount