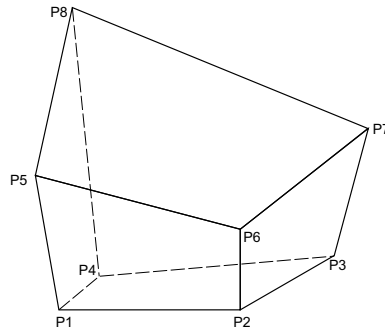# The numerical mesh

**For the Navier–Stokes Solver :**

- finite volume discretization based on arbitrary, hexagonal CV's

- block–structured grid with arbitrary grid block interconnections

- on inter–block boundaries : CV face on one side has a corresponding CV face on the neighbouring grid block boundary

For the Lagrangian Solver :

- complementation of the CV representation by 6 diagonals of the faces
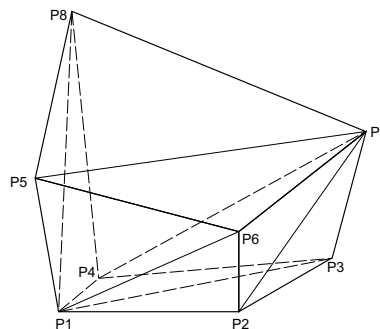
$\Longrightarrow$ dodecahedral CV's with plane triangular faces

$\Longrightarrow$ avoiding of overlapping regions and "empty" space between CV's

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7	**ASME Fluids Eng. Division Summer Meeting** **A 3–dimensional Lagrangian Solver for Disperse Multiphase** **Flows on Geometrically Complex Flow Domains** Th. Frank, E. Wassen, Q. Yu, Technical University Chemnitz, Germany