Jan Brandts, Sergey Korotov, Michal Křížek : *On the equivalence of regularity criteria for triangular and tetrahedral finite element partitions* ; Helsinki University of Technology, Institute of Mathematics, Research Reports A505 (2006).

Abstract: *In this note we examine several regularity criteria for families of simplicial finite element partitions in* $\mathbf{R}^d$, $d \in \{2, 3\}$. *These are usually required in numerical analysis and computer implementations. We prove the equivalence of four different definitions of regularity often proposed in literature. The first one uses the volume of simplices. The others involve the inscribed and circumscribed ball conditions, and the minimal angle condition.*

AMS subject classifications: 65N12, 65N30

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