

A LOCALIZED VERSION OF MORTAR METHOD FOR TREATMENT OF NONMATCHING INTERFACES: PERFORMANCE EVALUATION

Y. U. Song¹ and S. K. Youn¹ and K. C. Park²

¹ Department of Mechanical Engineering, Korea Advanced Institute of Science and
Technology, 291 Daehak-ro, Yuseong-gu, Daejeon 305-701, Republic of Korea

² Department of Aerospace Engineering Sciences and Center for Aerospace Structures,
University of Colorado, Campus Box 429, Boulder, CO 80309, U.S.A.

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A new algorithm for the construction of non matching interfaces via the method of localized Lagrange multipliers presented in a companion presentation[1] is implemented and its performance is assessed. Among the several features of the present interface method, it does not require a special treatment of the interface end nodes; it utilizes the same linear or bilinear interpolations for the construction of the present frame node; it handles the gaps in the interface surface without triggering the undesired spurious straining, thus shown to preserve the angular momentum. The algorithm can be implemented in a localized form[2] or in a mortar format[3, 4], depending one's preference for its adaptation in domain decomposition and/or contact/impact problems. More detailed performance assessment will be presented at the conference.

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