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**The complex variable interpolating moving least-squares method.** (English) Zbl 1291.65138

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Summary: In this paper, a new method for deriving the moving least-squares (MLS) approximation is presented first. Considering the unclear physical meaning of the functional in the existing complex variable moving least-squares (CVMLS) approximation, an improved CVMLS approximation is presented by constructing a new functional with an explicit physical meaning. Based on the improved CVMLS approximation, the complex variable interpolating moving least-squares (CVIMLS) method is presented, and the interpolating property of the corresponding shape function of the CVIMLS method is proved.

**MSC:**

65F30 Other matrix algorithms (MSC2010)

Cited in 18 Documents

**Keywords:**

moving least-squares approximation; complex variable moving least-squares approximation; interpolating moving least-squares method; shape function; weight function; inner product

**Full Text:** [DOI](#)

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