Jie Wu

2nd year PhD student in Civil Engineering, Tongji University seeking for visiting graduate student positions

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Research Skills & Interests

Skills

- Constructed comprehensive knowledge structure on new frontiers of computational mechanics through detailed study of 35+ highly cited articles during the first two years PhD student study;
- Exercised numerical examples with Matlab in numerical methods including Finite Element Method, Element free Galerkin Method, Meshless Shepard Interpolation Method, Material Point Method and Numerical Manifold Method;
- Revised the Matlab codes of Numerical Manifold Method and Meshless Shepard Interpolation Method developed by my research group;
- Studied Matlab codes introduced in papers including "An introduction to the programming of the meshless element free galerkin method" and "Meshless method: a review and computer implementation aspects";
- Owned knowledge of geological engineering as well due to the courses and internships through undergraduate study.

Interests

- Analysis of Fluid Structure Interaction problem.
- Multi-scale Simulation of cracks and interfaces network evolution with numerical methods like Meshless Methods, eXtended Finite Element Method or Generalized Finite Element Method;
- Numerical methods (Such as Material Point Method) for multiple media dynamic behavior of materials and structures under strong impact load;
- Simulation of mechanic properties for advanced materials in civil engineering;
- High performance computing

Education & Honors

09/2011-03/2016 (expected)   Doctor degree   civil engineering   Tongji University
> *Selected Honors*: Doctoral Entrance Award (2011); National Graduate Student A Grade Scholarship (2011-2016); Civil Engineering Research Assistantship (2011-2016);

09/2007-06/2011   Bachelor degree   geological engineering   China University of Geosciences (Wuhan)
> *Selected Honors:* National Scholarship granted by the Ministry of Education in China (top 3%, 2010); National Scholarship granted by the Ministry of Education in China (top 2%, 2009); Outstanding Undergraduate Student of China University of Geosciences (Wuhan) (top 3%, 2011)

Publications & Presentations

Publications

[1]. Y.C. Cai, **J. Wu**, S.N. Atluri. A new implementation of the numerical manifold method (NMM) for the modeling of non-collinear and intersecting cracks. CMES: Computer Modeling in Engineering & Sciences, 2013, vol.92, no.1, pp.63-85.

[2]. **Jie Wu**, Yongchang Cai. Generation algorithm of the cover system in manifold method with quadrature meshes. Journal of Tongji University (natural science). 2013, V41(05): 641-1645. (in Chinese) (EI Compendex)

Presentations

[1]. Feng Su, **Jie Wu***,Yongchang Cai. Virtual Crack Closure Technique Based on Meshless Shepard Interpolation Method. 13th International Conference on Fracture. Jun 16-21, 2013, Beijing, China. (Invited lecture & conference paper);

[2]. **Jie Wu***, Wenbo Zheng, Yongchang Cai. Soil Slope Stability Analysis Combining Shear Strength Reduction and Slip Line Method. 20th International Conference on Computational & Experimental Engineering & Sciences (ICCES'13). May 24-28, 2013, Seattle, USA. (Invited lecture);

[3]. Yongchang Cai, Wenbo Zheng* and **Jie Wu**. Rock Slope Stability Analysis with Numerical Manifold Method. 6th International Workshop on New Frontiers in Computational Geotechnics, May 21-23, 2012, Takayama, Japan. (Invited lecture and conference paper);