




DOHYUN KIM

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RESEARCH INTEREST

Finite Element Methods, Polygonal Finite Element Methods, Nonconforming Methods, Fluid Dynamics, Scientific Computing



EDUCATION

PH.D. Computational Science and Engineering | Yonsei University, South Korea
2015 MAR – 2021 FEB

B.SC. Mathematics | Hanyang University, South Korea
2011 MAR – 2015 FEB



PUBLICATIONS

Morley finite element methods for the stationary quasi-geostrophic equation | **Computer Methods in Applied Mechanics and Engineering**, 375, 113639 (2021)
Dohyun Kim, Amiya K. Pani, Eun-Jae Park

Staggered DG methods for the pseudostress-velocity formulation of the Stokes equations on general meshes | **SIAM Journal on Scientific Computing**, 42, pp. A2537-A2560 (2020)
Dohyun Kim, Lina Zhao, Eun-Jae Park

Error estimates of B-spline based finite-element methods for the stationary quasi-geostrophic equations of the ocean | **Computer Methods in Applied Mechanics and Engineering**, 335, pp. 255-272 (2018)
Dohyun Kim, Tae-Yeon Kim, Eun-Jae Park, Dong-wook Shin



INTERNATIONAL CONFERENCES

Staggered Discontinuous Galerkin Methods for the Stokes Equations on General Polygonal Meshes | **The 26th International Domain Decomposition Conference**
December 7-12, 2020, Hong Kong, China

Error estimates of B-spline based finite-element methods for the stationary quasi-geostrophic equations of the ocean | The Week of Applied Mathematics and Mathematical Modelling

October 7-11, 2019, Vladivostok, Russia

A C0-discontinuous Galerkin method for quasi-geostrophic equations | International Conference on Computational Mathematics – Advances in Computational PDEs

September 29-October 2, 2018, Seoul, South Korea



DOMESTIC CONFERENCES

C0-interior penalty methods for stationary quasi-geostrophic equations | KSIAM 2018 Annual Meeting

November 2-4, 2018, Jeju, South Korea

Finite element methods for wind-driven large scale ocean circulation with spline basis | 2017 KSIAM Annual meeting

November 3-5, 2017, Busan, South Korea

(POSTER) B-spline based finite element method for a Large scale ocean circulation | KSIAM 2017 Spring Conference joint with EASIAM

June 23-24, 2017, Seoul, South Korea

Discontinuous Galerkin methods for Hodgkin-Huxley model | 2017 KMS Spring Meeting

April 28-30, 2017, Gwangju, South Korea



AWARDS

Excellent Paper Encouragement Award | Yonsei University 2019

Poster Excellence Award | KSIAM 2017

KSIAM-MathWorks Problem Challenge-Award of Excellence | KSIAM 2018



COMPUTER SKILLS

- MATLAB
- Python
- C++



LANGUAGE

- Advanced level in English
- Native proficiency in Korean