|  |  |
| --- | --- |
| Dohyun  KIM | Phone: +82-10-4186-5725  Email: dhkim.cse@gmail.com  https://dohyun-cse.github.io/ |

|  |  |
| --- | --- |
|  | **Research interest** |

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

|  |  |
| --- | --- |
|  | Education |

## Ph.D. Computational Science and Engineering – Mathematics | Yonsei University, South Korea

### 2015 MAR – 2021 FEB

## B.Sc. Mathematics | Hanyang University, South Korea

### 2011 Mar – 2015 FeB

|  |  |
| --- | --- |
|  | Publications |

## (Submitted) Staggered DG method with small edges for Darcy flows in fractured porous media| arXiv:2005.10955

Lina Zhao, **Dohyun Kim**, Eun-Jae Park, Eric Chung

## 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 |

## (Oral) 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 (Online)

## (Oral) 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

## (Oral) 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

## (Proceeding) Polygonal staggered discontinuous Galerkin methods | Oberwolfach Report No. 3, pp. 25-27

Eun-Jae Park, Lina Zhao, **Dohyun Kim**

January 10-16, 2021, Oberwolfach, Germany

|  |  |
| --- | --- |
|  | Domestic Conferences |

## (Chair) Special Session: Numerical Modeling and Computation | 2020 KMS Annual Meeting

July 03, 2020, Seoul, South Korea

## (Oral) High-order staggered discontinuous Galerkin methods for the Stokes problem | High-order Methods & Its Applications

December 20, 2019, Seoul, South Korea

## (Poster) A C0-interior penalty methods for the quasi-geostrophic equations: A posteriori error analysis | KSIAM 2019 Annual Meeting

November 8-10, 2019, Yeosu, South Korea

## (Chair) Special Session: Numerical Modeling and Computation | 2019 KMS Annual Meeting

October 25-27, 2019, Seoul, South Korea

## (Oral) Error estimates of B-spline based finite element methods for the stationary quasi-geostrophic equations of the ocean | 2019 KMS Annual Meeting

October 25-27, 2019, Seoul, South Korea

## (Oral) C0-interior penalty methods for stationary quasi-geostrophic equations | KSIAM 2018 Annual Meeting

November 2-4, 2018, Busan, South Korea

## (Oral) 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

## (Oral) Discontinuous Galerkin methods for Hodgkin-Huxley model | 2017 KMS Spring Meeting

April 28-30, 2017, Gwangju, South Korea

|  |  |
| --- | --- |
|  | Awards |

## Merit Academic Paper Award | Yonsei University 2019

## Graduate School of YONSEI University Research Scholarship grants in 2019| Yonsei University 2019

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

## Poster Excellence Award| KSIAM 2017

|  |  |
| --- | --- |
|  | Computer Skills |

|  |  |
| --- | --- |
| * MATLAB * Python | * C++ |

|  |  |
| --- | --- |
|  | Language |

|  |  |
| --- | --- |
| * Advanced level in **English** | * Native proficiency in **Korean** |