

# ZHIWEI PENG

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## EDUCATION

### The University of British Columbia

Vancouver, BC

#### Master of Applied Science: Mechanical Engineering

Sep 2014-present

- GPA: 3.9/4.0, member researcher of the **Institute of Applied Mathematics**.
- Coursework included Partial Differential Equations, Perturbation Methods, Fluid Mechanics, *etc.*

### Beijing University of Aeronautics & Astronautics

Beijing, China

#### B.S., Thermal Energy and Power Engineering

Sep 2010-Jun 2014

- GPA: 3.8/4.0, ranking top 5% (189 students), *Outstanding Thesis Award*
- Coursework included Fluid Mechanics, Theoretical Mechanics, Probability & Statistics, and **88** more.

#### B.S., Applied Mathematics, dual degree

Sep 2011-Jun 2014

- GPA: 3.88/4.0, coursework included Ordinary Differential Equations, Differential Geometry, Numerical Analysis, Mathematical Modelling, Functional Analysis, *etc.*

## EXPERIENCE

### The University of British Columbia

Vancouver, BC

#### Graduate Research Assistant

Sep 2014-present

- Mathematical modelling based on physical principles, developed analytical solutions when applicable
- Developed and incorporated algorithms including Finite Difference, Nonlinear Programming, *etc.*

#### Teaching Assistant, MATH 358: Engineering Analysis, 4 hrs/week

Jan 2016-Apr 2016

- Taught lab sessions on implementing algorithms in Matlab to solve Differential Equations.
- Created exercises and solutions, evaluated student performance.

### Ecole Nationale de l'Aviation Civile

Toulouse, France

#### Exchange student

Sep 2013-Feb 2014

- Master's course in International Air Transport Operations Management
- Coursework included Flight Mechanics, Aircraft Structure, Operations Research, Convex Optimization, Econometrics, *etc.*
- BUAA excellent undergrad exchange program, fully supported by the **China Scholarship Council**

## SELECTED HONORS & AWARDS

- Graduate Support Initiative (GSI) Award, UBC Feb 2015
- International Tuition Award, UBC 2014-2016
- 2nd Prize, 3rd National Mathematics Contest (for university students) 2011
- BUAA Mathematics Contest, ranking 7/1500 2012
- The President Scholarship 2012
- The Baogang Scholarship 2012
- The Excellent Student Award 2010-2014
- The First Class Scholarship 2012

## SKILLS & INTERESTS

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- Proficient in numerical simulation and data visualization with **Python** & **Matlab**, symbolic computation with **Mathematica**, experience with the **C** programming language
- Proficient in English, native in Mandarin Chinese

## JOURNAL PUBLICATIONS

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1. **Z. Peng**, O.S. Pak and G.J. Elfring, [Characteristics of undulatory locomotion in granular media](#), Phys. Fluids, 28, 031901 (2016)
  - featured in the CSME (Canadian Society of Mechanical Engineering) magazine research highlights (to appear)

## CONFERENCE PRESENTATIONS\*

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- Propulsive thrust of a driven filament at low Reynolds number with non-uniform flexibility, Z. Peng, G.J. Elfring and **O.S. Pak**, 24th International Congress of Theoretical and Applied Mechanics, Montréal, Canada, August 21-26, 2016 (Accepted for oral presentation)
- [Characterization of undulatory locomotion in granular media](#), **Z. Peng**, O.S. Pak and G.J. Elfring, 68th Annual Meeting of the APS Division of Fluid Dynamics, Boston, MA, USA, November 22-24, 2015

\*Presenter in bold