

## MASOUD JALALIBIDGOLI

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### EDUCATION

- 2011-2017     **Ph. D. in Engineering sciences (Mechanical Engineering)**  
GPA: 4.0, University of California, San Diego,
- 2009-2011     **M. S. in Mechanical Engineering**  
GPA: 4.0, University of Tehran, Iran
- 2006-2010     **B. S. in Industrial Engineering**  
GPA: 3.87, University of Tehran, Iran
- 2005-2009     **B. S. in Mechanical Engineering**  
GPA: 3.96, *First Rank*, University of Tehran, Iran

### PUBLICATIONS

**M. Jalali**, S. Sarkar , “Large eddy simulation of flow and turbulence at the steep topography of Luzon Strait”, *Geophys. Res. Lett.*, Accepted

V.K. Chalamalla, A. Scotti, E. Santilli, **M. Jalali**, S.Sarkar, “SOMAR-LES: A framework for multi-scale modeling of turbulent stratified oceanic flows” under review for publication in *Ocean Model.*

**M. Jalali**, V.K. Chalamalla, S. Sarkar , “On the accuracy of overturn-based estimates of turbulent dissipation at rough topography”, *J. Phys. Oceanogr*, 47.3: 513-532, 2017

**M. Jalali**,A. VanDine, V.K. Chalamalla, S. Sarkar, “Oscillatory stratified flow over supercritical topography: wave energetics and turbulence”, *Comput. Fluids*, 0045-7930, 2016.

**M. Jalali**, N. Rapaka, S. Sarkar, “Tidal flow over topography: effect of excursion number on wave energetics and turbulence”, *J.Fluid Mech.*, 750, 259-283, 2014

### EXPERIENCES

- 2017-Present     **Post-doctoral fellowship**  
Computational Fluid Dynamics lab, UCSD

- 2012-2017      **Graduate Student Research Assistant**  
Computational Fluid Dynamics lab, UCSD
- 2016            **Teaching Assistant**, Numerical Methods  
University of California, San Diego
- 2014            **Micro MBA Program**  
University of California, San Diego
- 2012-2013      **Triton Leadership Certificate (TLC)**  
University of California, San Diego
- 2012            **Teaching Assistant**, Thermodynamics  
University of California, San Diego
- 2010-2011      **Graduate Student Research Assistant**  
Spray combustion group, University of Tehran
- 2011-2015      **Reviewer** scientific publications for Journal of Mechanical Science and Technology

#### HONORS AND AWARDS

- 2017            **MAE Distinguished Fellowship Award**, Graduate Affairs Committee, University of California, San Diego.
- 2016            **GSA Travel Grant Award**, University of California, San Diego.
- 2015            **Judge** of Iranian National Festival of Harekat
- 2009            **Ranked 1st** among 115 undergraduate students of Mechanical Engineering, University of Tehran.
- 2008            **Ranked 3rd** in the 1st round and ranked 6th in the 2nd round of Iranian Mechanical Engineering Olympiad, Tehran.
- 2008            **F.O.E. (Faculty of Engineering) Award** for being the top student in the BSc program, Mechanical Engineering Department, University of Tehran.
- 2007            **F.O.E. (Faculty of Engineering) Award** for being the top student in the BSc program, Mechanical Engineering Department, University of Tehran.
- 2005            **Top 0.1 %** in National University Entrance Exam, Tehran, Iran.

## CONFERENCE PRESENTATIONS

**M. Jalali**, S. Sarkar, “Energetics of baroclinic response to tidal forcing at steep topography”, 69th Annual Meeting of The APS DFD, Portland, USA, 2016

**M. Jalali**, S. Sarkar, “On the baroclinic response of supercritical topography to an oscillating tide:LES results”, VIIIth International Symposium on Stratified Flows (ISSF), San Diego, CA, USA, 2016

**M. Jalali**, S. Sarkar “On turbulence losses at rough model topography: LES results”, So Cal Fluids X, Irvine, USA, 2016

**M. Jalali**, V. Chalamalla , S. Sarkar, “Local turbulence and baroclinic energy balance in a Luzon Strait model”, 2016 Ocean Sciences Meeting, New Orleans, USA, 2016 [Poster session]

S. Sarkar, **M. Jalali**, V. Chalamalla “On Turbulence Losses at Rough Topography: LES results”, 2016 Ocean Sciences Meeting, New Orleans, USA, 2016 [Not Presenter]

V.Chalamalla, **M. Jalali**, S.Sarkar, “Accuracy of Thorpe scale dissipation estimates during mixing driven by internal tide breaking”, 2016 Ocean Sciences Meeting, New Orleans, USA, 2016 [Poster session]

**M. Jalali**, S. Sarkar “Turbulence mechanisms in a computational model of Luzon Strait”, So Cal Fluids IX, San Diego, USA, 2015

V.Chalamalla, E Santilli, **M. Jalali**, A Scotti, S.Sarkar, “SOMAR-LES for multiscale modeling of internal tide generation”, 68th Annual Meeting of The APS DFD, Boston, USA, 2015 [Not presenter]

**M. Jalali**, V. Chalamalla, S. Sarkar, “On accuracy of overturn-based estimates of turbulent dissipation in a Luzon Strait model simulation with realistic topography”, 68th Annual Meeting of The APS DFD, Boston, USA, 2015

I. Gohari, **M. Jalali** , S. Baden, S. Sarkar “Low-Level Jets, Coherent Structures and Turbulence in a Stably Stratified Atmospheric Boundary Layer”, 67th Annual Meeting of The APS DFD, San Fransico, USA, 2014 [Not presenter]

**M. Jalali**, S. Sarkar “Turbulence and dissipation in a computational model of Luzon Strait”, 67th Annual Meeting of The APS DFD, San Fransico, USA, 2014

**M. Jalali**, S. Sarkar ” Turbulence at generation sites of topographic internal waves”, Conference of Nonlinear effects in Internal waves, Cornell University, Ithaca, USA, 2014

**M. Jalali**, N. Rapaka, S. Sarkar, “Effect on  $Ex$  on internal waves created by tidal flow over near-critical topographic features”, 66th Annual Meeting of The APS DFD, Pittsburg, USA, 2013

**M. Jalali**, N. Rapaka, S. Sarkar, “Internal waves and turbulence created by tidal flow over small-scale topographic features”, 65th Annual Meeting of The APS DFD, San Diego, USA, 2012 [Poster session]

Gh. Salehi, **M. Jalali**, S. Zeinali, K. Hassanzadeh, “An Investigation on Micro Slippery Flows in Micro Channels”, ESDA 2010(ASME) conference, Turkey, 2010 [Not presenter]

Gh. Salehi, S. Zeinali, **M. Jalali**, K. Hassanzadeh “Simulation and Optimization of Usage of MERT Tube in Steam Cracker Furnaces by Genetic Algorithm” , HEFAT 2010 conference-,Antalya, Turkey, 2010 [Not presenter]

M, Amidpoor, GH.R. Salehi, S. Zeinali, **M. Jalali** ”simulating and optimization of olefin furnace, 17th Annual International Conference on Mechanical Engineering, Tehran, Iran, 2009

GH.R. Salehi, **M. Jalali**, S. Zeinali ”Modeling of NOx Emission in Steam Crackers Industrial Burners”, 4th International Exergy, Energy and Environment Symposium, Sharjah, UAE, 2009

#### Membership

2011-Present	American Physical Society (APS)
2015-Present	American Geophysical Union (AGU)
2016-2017	Student Fee Advisory Committee, University of California, San Diego.
2012-2013	Iranian Student Association (ISTA at UC San Diego), Board Member
2011-2013	American Society of Mechanical Engineering (ASME)
2010-2011	Student Scientific Association of Mechanical Engineering, University of Tehran, President