

**IDENTIFYING INFORMATION:**

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**NAME:** Vorobieff, Peter

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**POSITION TITLE:** Regents' Professor

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**PRIMARY ORGANIZATION AND LOCATION:** University of New Mexico, Albuquerque, New Mexico, United States

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**Professional Preparation:**

ORGANIZATION AND LOCATION	DEGREE (if applicable)	RECEIPT DATE	FIELD OF STUDY
Los Alamos National Laboratory, Los Alamos, NM, USA	Postdoctoral Fellow	06/1996 - 08/1999	Experimental fluid mechanics
Lehigh University, Bethlehem, PA, USA	PHD	05/1996	Mechanical Engineering and Applied Mathematics
M.V. Lomonosov Moscow State University, Moscow, Not Applicable, N/A, Russia	MS	05/1989	Mechanics and Applied Mathematics

**Appointments and Positions**

1999 - present	Regents' Professor, University of New Mexico, Department of Mechanical Engineering, Albuquerque, New Mexico, United States
2016 - present	Professor, Associate Chair, and Director of Facilities, University of New Mexico, Albuquerque, NM, USA
2012 - 2016	Professor and Assistant Chair, University of New Mexico, Albuquerque, NM, USA
2005 - 2012	Associate Professor, University of New Mexico, Albuquerque, NM, USA
1999 - 2005	Assistant Professor, University of New Mexico, Albuquerque, NM, USA
1991 - 1992	Project leader, Association of Space Explorers, Moscow, Not Applicable, N/A, Russia
1989 - 1991	Research Associate, Institute for High Temperatures, Moscow, Not Applicable, N/A, Russia

**Products****Products Most Closely Related to the Proposed Project**

- Anderson M, Vorobieff P, Truman C, Corbin C, Kuehner G, Wayne P, Conroy J, White R, Kumar S. An experimental and numerical study of shock interaction with a gas column seeded with droplets. *Shock Waves*. 2015; 25(2):107-125. Available from: <http://link.springer.com/10.1007/s00193-015-0555-6> DOI: 10.1007/s00193-015-0555-6
- Romero B, Poroseva S, Vorobieff P, Reisner J. Simulations of the shock-driven Kelvin–Helmholtz instability in inclined gas curtains. *Physics of Fluids*. 2021 June 01; 33(6):- . Available from: <https://pubs.aip.org/pof/article/33/6/064103/1065635/Simulations-of-the-shock-driven-Kelvin-Helmholtz> DOI: 10.1063/5.0051459
- Trujillo M, Vorobieff P, Vigil F, Bernard T, Corbin C. Instrumentation Laboratory: Challenges of Teaching a Large Class. 2014 ASEE International Forum Proceedings. 2014 ASEE International Forum; ; Indianapolis, Indiana. ASEE Conferences; c2014. Available from:

<http://peer.asee.org/17186> DOI: 10.18260/1-2--17186

4. Vorobieff P, Anderson M, Conroy J, White R, Truman C, Kumar S. Vortex Formation in a Shock-Accelerated Gas Induced by Particle Seeding. *Physical Review Letters*. 2011; 106(18):-  
Available from: <https://link.aps.org/doi/10.1103/PhysRevLett.106.184503> DOI:  
10.1103/PhysRevLett.106.184503
5. Wayne P, Cooper S, Simons D, Trueba-Monje I, Freelong D, Vigil G, Vorobieff P, Truman C, Vorob'ev V, Clark T. Dalton's and Amagat's laws fail in gas mixtures with shock propagation. *Science Advances*. 2019 December 06; 5(12):eaax4749-. Available from:  
<https://advances.sciencemag.org/lookup/doi/10.1126/sciadv.aax4749> DOI:  
10.1126/sciadv.aax4749

*Other Significant Products, Whether or Not Related to the Proposed Project*

1. BIRNIR B, MERTENS K, PUTKARADZE V, VOROBIEFF P. Morphology of a stream flowing down an inclined plane. Part 2. Meandering. *Journal of Fluid Mechanics*. 2008 June 30; 607:401-411. Available from:  
[https://www.cambridge.org/core/product/identifier/S0022112008002000/type/journal\\_article](https://www.cambridge.org/core/product/identifier/S0022112008002000/type/journal_article)  
DOI: 10.1017/S0022112008002000
2. Korlimarla A, Vorobieff P. Evolution of a quasi-two-dimensional shear layer in a soap film flow. *Physics of Fluids*. 2020 December 01; 32(12):-  
Available from:  
<https://pubs.aip.org/pof/article/32/12/124112/1063089/Evolution-of-a-quasi-two-dimensional-shear-layer> DOI: 10.1063/5.0030319
3. MERTENS K, PUTKARADZE V, VOROBIEFF P. Morphology of a stream flowing down an inclined plane. Part 1. Braiding. *Journal of Fluid Mechanics*. 2005; 531:49-58. Available from:  
[http://www.journals.cambridge.org/abstract\\_S0022112005003873](http://www.journals.cambridge.org/abstract_S0022112005003873) DOI:  
10.1017/S0022112005003873
4. Mammoli A, Vorobieff P, Barsun H, Burnett R, Fisher D. Energetic, economic and environmental performance of a solar-thermal-assisted HVAC system. *Energy and Buildings*. 2010; 42(9):1524-1535. Available from:  
<https://linkinghub.elsevier.com/retrieve/pii/S0378778810001155> DOI:  
10.1016/j.enbuild.2010.03.023
5. Mertens K, Putkaradze V, Vorobieff P. Braiding patterns on an inclined plane. *Nature*. 2004; 430(6996):165-165. Available from: <https://www.nature.com/articles/430165a> DOI:  
10.1038/430165a

**Synergistic Activities**

1. UNM Solar Splash faculty team advisor, 2016-present. Solar Splash is the world championship of collegiate solar electric boating.
2. Pi Tau Sigma engineering honors society faculty advisor (New Mexico chapter), 2016 - present.
3. Editorial board member, *Transactions of the Wessex Institute*, 2014-present.
4. Associate editor, *ASME Journal of Fluids Engineering*, 2010-2016.
5. UNM ASME student chapter advisor, 2016 - present.

**Certification:**

When the individual signs the certification on behalf of themselves, they are certifying that the

information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Vorobieff, Peter in SciENcv on 2024-04-15 14:01:46