

# Curriculum Vitae

## Bashar Rafee Qawasmeh

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### Education

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- Doctor of philosophy (Ph.D.) in Mechanical Engineering, New Mexico State University (NMSU), Las Cruces, New Mexico (May 2012)
  - Master of science (M.S.) in Mechanical Engineering, New Mexico State University (NMSU), Las Cruces, New Mexico (August 2008)
  - Master of science (M.S.) in Mechanical Engineering, Jordan University of Science and Technology (JUST), Irbid, Jordan (June 2005)
  - Bachelor of science (B.S.) in Mechanical Engineering (Mechatronics), Jordan University of Science and Technology (JUST), Irbid, Jordan (September 2002)
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### Professional Experience

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- Assistant Professor, Department of Mechanical Engineering, University of Jordan, Spring 2015 - Present
  - Research Assistant Professor, (NMSU), Summer 2014 – Fall 2014
  - College Assistant Professor, (NMSU), Fall 2012 – Spring 2014
  - Instructor, (NMSU), Spring 2010 - Spring 2012
  - Research Assistant, (NMSU) , Fall 2007 - Spring 2012
  - Teaching Assistant, (NMSU) , Spring 2007
  - Instructor (Thermal-Power stream), Al-Quds College, Amman, Jordan, 2006
  - Research Assistant/ Teaching Assistant, (JUST) , Spring 2003-2006
  - Training Student, Jordan Air Maintenance Company (Joramco), Amman, Jordan, Summer 2002
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### Research Interests

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- Computational Fluid Dynamics (CFD)
  - Model Reduction
  - Heat Transfer
  - Flow Control
  - Fluid-Structure Interaction

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## Courses Taught

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### Undergraduate:

#### University of Jordan

- Dynamics
- Numerical Methods
- Fluid Mechanics I
- Lab. of Thermal and Fluid Sciences

#### NMSU

- ME 328 "Engineering Analysis I"
- ME 332 "Vibrations"
- ME 333 "Intermediate Dynamics"
- ME 338 "Fluid Mechanics"
- ME 341 "Heat Transfer"
- AE 364 "Flight Dynamics and Controls"
- AE 447 "Aero-Fluids Laboratory"

### Graduate:

#### NMSU

- ME 511, "Dynamics"

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## Journal Publications and Peer-reviewed Conference Articles

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- B. R. Qawasmeh, and M. Wei, Low-dimensional models for compressible temporally-developing shear layers, *Journal of Fluid Mechanics*, Vol. 731, pp. 364—393, 2013
- M. Wei, B. R. Qawasmeh, M. Barone, B. G. van Bloemen Waanders, and L. Zhou, Low-dimensional model of spatial shear layers, *Physics of Fluids*, Vol. 24, No. 014108, doi: 10.1063/1.3678016, 2012
- M. Wei, B. R. Qawasmeh, M. Barone, and B. G. van Bloemen Waanders, Low-dimensional modeling for spatially developing free shear layers, *AIAA paper 2009-363*, Orlando, FL, 2009

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## Skills

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- Familiar with Linux and Windows operational systems
- Skilled in Microsoft office applications, Latex, and Tecplot
- Good Experience in FORTRAN, MATLAB, Fluent, AutoCAD, Mechanical Desktop, and Mathcad

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## Selected Talks, MS. Thesis and PhD Dissertation

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- Ph.D. Dissertation, B. R. Qawasmeh, Extreme model reduction of shear layers, (NMSU), May, 2012
- B. R. Qawasmeh, and M. Wei, Extreme model reduction for free shear layers, Southwest Regional Technology Symposium, Las Cruces, NM, April 21<sup>st</sup>, 2011
- B. R. Qawasmeh, and M. Wei, A least order model for temporally-developing compressible shear layers, *Bulletin of the American Physical Society*, Vol. 55, No. 16, Long Beach, CA, 2010

- B. R. Qawasmeh, and M. Wei, Mode competition in a low-dimensional model of shear layers, Southwest Regional Technology Symposium, Las Cruces, NM, April 15<sup>th</sup>, 2010
  - B. R. Qawasmeh, and M. Wei, Low-dimensional modeling of shear layers, *SIAM* conference on Applications of Dynamical Systems, Snowbird, UT, May, 2009
  - B. R. Qawasmeh, and M. Wei, Modeling free shear layers in a symmetry-reduced space, Southwest Regional Technology Symposium, Las Cruces, NM, April 16<sup>th</sup>, 2009
  - B. R. Qawasmeh, and M. Wei, Projection of spatial shear layers in a symmetry-reduced space, *Bulletin of the American Physical Society*, Vol. 53, No. 15, San Antonio, TX, 2008
  - B. R. Qawasmeh, Numerical Methods in fluid mechanics applications, Jordanian-German Winter Academy, Amman, Jordan, February(4<sup>th</sup>-11<sup>th</sup>), 2006
  - MS. Thesis, B. R. Qawasmeh, Natural Convection Heat Transfer From a Horizontal Cylindrical Annulus Partially Filled With Angularly Dispersed Porous Medium , Mechanical Engineering Department, (JUST), June, 2005
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## **Funded Projects during my PhD**

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- Army Research Laboratory (ARL)-Micro Autonomous System and Technology (MAST)
  - Army Research Laboratory (ARL)-Army High Performance Computing Research Center (AHPCRC)
  - Sandia-University Research Program (SURP)
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## **Awards and Scientific Societies**

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- NMSU Graduate Conference Travel Award (2010)
  - American Physical Society (APS) Student Travel Award (2008)
  - American Physical Society (APS) member (2008-2010)
  - Society for Industrial and Applied Mathematics (SIAM) member
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## **Professional Services:**

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### **Paper referee**

- Aerospace Science and Technology
- Energies
- Papers for academic conferences *AIAA*

### **Committee Member**

- MS student: Shawna Libeau, Fall 2013
- MS student: Efrain Garcia, Spring 2014
- MS student: John Chambles, Spring 2014

### **Activities**

- Prepared ABET syllabi and some flow charts for the courses I taught
- Supervised lab tours