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## Hussein N. Dalgamoni, PhD

Assistant Professor, Department of Mechanical Engineering,  
The Hashemite University, Zarqa 13133, Jordan  
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### Education

#### PhD in Mechanical Engineering

State University of New York (SUNY) at Binghamton, NY, USA  
Dissertation: “*Axisymmetric Lattice Boltzmann Model of droplet impact on solid surfaces*” 2014-2019

#### MSc in Mechanical Engineering

Jordan University of Science and Technology (JUST), Irbid, Jordan  
Thesis: “*Characteristics of Regenerated Automotive Gas Turbine at Part-Load*” 2003-2007

#### BSc in Mechanical Engineering

Mu'tah University, Kerak, Jordan  
Senior Project: “*The Mechanical Design of a Computerized Handling and Cutting of Materials Equipment for Classical Lathe Machine; Robotics*” 1998-2003

### Teaching/Research Experiences

**Assistant Professor, Dept. of Mechanical Engineering, The Hashemite University, Zarqa, Jordan** 2/2/2020-present

**Part-time instructor, Dept. of Mechanical Engineering Binghamton University, Binghamton, NY** 5/2019-8/2019

**Research Assistant, Soft Mater and Interfacial Phenomena Lab. Dept. of Mechanical Engineering, Binghamton University, Binghamton, NY** 2/2016-11/2019

#### Student Assistant, Binghamton University, Binghamton, NY

- Assisted in teaching Analytical Methods course (ME535), a graduate level course in mathematics, Department of Mechanical Engineering 8/2018-12/2018
- Designed and conducted few lectures
- Graded the exams, the assignments, and the quizzes throughout the course session

#### Student Assistant, Binghamton University, Binghamton, NY

- Conducted research in computational fluid modeling of droplet impact dynamics 5/2018-8/2018

#### Graduate Assistant, Binghamton University, Binghamton, NY

- Conducting research in computational fluid modeling of droplet impact dynamics 8/2017-5/2018

#### Full-time lecturer, University of Tabuk, Tabuk, Saudi Arabia

- Full time lecturer in the College of Engineering at the University of Tabuk 9/2009-8/2014

- Courses taught: Engineering Mechanics (Statics and Dynamics), and Engineering Drawing (Manual and AutoCAD)
- Participated in the Academic Plan Committee of the Mechanical Engineering
- Worked in the Academic Affairs Unit in the College of Engineering
- Participated in different administrative committees in the College of Engineering
- Attended workshops with both academic and administrative scopes
- Designed courses' binders at the end of each semester

**Part-time lecturer, Jordan University of Science and Technology, Irbid, Jordan**

- Part-time lecturer in the College of Engineering at Jordan University of Science and Technology **2/2006-6/2008**
- Courses taught: Engineering Drawing (Manual and AutoCAD)
- Designed the course binder of Engineering Drawing

**Teaching Assistant, Jordan University of Science and Technology, Irbid, Jordan**

- Assisted in teaching many courses in the College of Engineering at Jordan University of Science and Technology
- Courses taught: Applied Mathematics for Engineers, Numerical Methods for Engineers, Engineering Thermodynamics, Internal Combustion Engines, Thermal Power Lab, Instrumentation and Dynamics Systems Lab, Engineering Drawing **2/2004-2/2006**

### Professional/Industrial Experiences

**Mechanical Engineer, Ministry of Public Works and Housing, Amman, Jordan**

- Directed projects related to mechanical systems existing in buildings
- Designed specification for systems such as: HVAC, firefighting, plumbing, BMS **7/2009-9/2009**

**Mechanical Engineer, Ministry of Health, Amman, Jordan**

- Supervised maintenance contracts in many hospitals.
- Directed projects related to mechanical systems existing in healthcare buildings **6/2008-7/2009**
- Designed specification for systems such as: HVAC, firefighting, plumbing, BMS

**Mechanical Engineer, Irbid Greatest Municipality, Irbid, Jordan**

- Supervised daily maintenance jobs accomplished in the Directorate of Electrical and Mechanical works **8/2003-8/2004**

### Research Interests

- Modeling/simulating fluid dynamics systems using lattice Boltzmann method

- Fluid dynamics, transport phenomena and thermodynamics related fields
- Gas turbine/internal combustion engines

## Publications

### Journal Articles

1. **Hussein N Dalgamoni**, Xin Yong, “Axisymmetric lattice Boltzmann simulation of droplet impact on solid surfaces” *Physical Review E*. **98**, 013102, (2018)
2. Yousef SH Najjar, **Hussein N Dalgamoni** “Greening the future of transport by using a regenerative variable geometry gas turbine engine” *Journal of Power Technologies*, **94** (4): 259-269, (2014)

### Conferences Presentation

1. **Hussein N Dalgamoni**, Xin Yong, “Axisymmetric lattice Boltzmann simulation of droplet impact on solid surfaces” *APS November Meeting 2017, Denver, CO, 11/2017*
2. **Hussein N Dalgamoni**, Xin Yong, “Axisymmetric lattice Boltzmann model of droplet impact on curved surfaces” *APS March Meeting 2019, Boston, MA, March 4-8/2019*

## Training and Course Attendance Experience

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| 1. <b>Medical Gases Design</b> , 20 hours, Engineering Training Center, Jordanian Engineers Association.   | <b>Feb. 8-16, 2009</b> |
| 2. <b>Maintenance Management</b> , 20 hours, Engineering Training Center, Jordanian Engineers Association. | <b>Nov. 9-13, 2008</b> |
| 3. <b>MATLAB</b> , IEEE Student Branch, Jordan University of Science and Technology.                       | <b>Oct. 1-30, 2005</b> |

## Skills

- AutoCAD 2D and 3D
- Microsoft Office
- Coding (MATLAB, C-language)