

# Curriculum Vitae

**Nima Samkhaniani**

## Personal information

Nationality: Iranian  
Date of Birth: June 2<sup>th</sup> 1986    Marital Status: Single  
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## Education (2004-2016)

Ph.D in Mechanical Engineering  
Tarbiat Modares University, Tehran, Iran  
GPA: 16.83/20

M.Sc. in Mechanical Engineering  
Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran  
GPA: 15.18/20

B.Sc. in Mechanical Engineering  
Isfahan University of Technology, Isfahan, Iran  
GPA: 15.68/20

## Language Proficiency

Persian (Native)  
English (Professional working proficiency)

## Research Interest

Computational Fluid Dynamics, Multiphase Flow, Wind Engineering, Natural and Convective Heat Transfer, Renewable Energy, Phase Change Phenomena

## Publications

Available at researchgate ([https://www.researchgate.net/profile/Nima\\_Samkhaniani](https://www.researchgate.net/profile/Nima_Samkhaniani))

### book

"*Numerical simulation of flow and heat transfer with OpenFOAM*", book, second edition (in Persian)  
ISBN: 978-600-332-014-7,

"*Numerical simulation of flow and heat transfer with OpenFOAM*", book, first edition (in Persian)  
ISBN: 978-600-5716-83-2

### Journal Paper

"*The evaluation of the diffuse interface method for phase change simulations using OpenFOAM*",  
Heat Transfer-Asian Research, 2017

"*Numerical simulation of superheated vapor bubble rising in stagnant liquid*",  
Heat and Mass Transfer, 2017

"*Numerical simulation of bubble condensation using CF-VOF*",  
Progress in Nuclear Energy, 2016, vol. 89, 120-131

"*Simulation of Convective Heat Transfer of Gas-Liquid Bubble Train Flow in Wet Micro-Tube*",  
Heat Transfer-Asian Research, 2016

"*Numerical simulation of reaction injection moulding with polyurethane foam*",  
Journal of Cellular Plastics, 2013, vol. 49 no. 5, 405-421

"*Numerical Simulation of Gas-liquid Slug Flow in a Wet Micro tube*",  
fluid mechanic and Aerospace Journal, 2013, vol. 2 no. 1, 37-45 (in Persian)

"*Contact Angle Comparison of Droplet Impact on Solid Surface Using VoF*",  
Modares Mechanical Engineering Journal, 2015, vol. 15 no 3, 84-94 (in Persian)

"*Numerical Simulation of Bubble Impact and Movement alongside Inclined Plate with VoF Method*",  
Modares Mechanical Engineering Journal, 2015, vol. 15 no 10, 329-340 (in Persian)

### Conference Paper

"Numerical simulation of slug flow pattern in T junction using volume of fluid method", Modares Mechanical Engineering Journal, 2015, vol. 15 no 10, 41-48 (in Persian)

"Numerical Simulation of Laminar Film Condensation over Vertical Plate with VoF Method", Modares Mechanical Engineering Journal, 2015, vol. 15 no 2, 214-220 (in Persian)

"Comparison of Parasite Current Reduction Methods in Simulation of Two Phase Flow with VOF", Modares Mechanical Engineering Journal, 2015, vol. 15 no 2, 243-252 (in Persian)

"Energy modeling and air flow simulation of an ancient wind catcher in Yazd", 3.th International Congress on Civil Engineering , Architecture and Urban Development,2015,Tehran , Iran

"Numerical simulation of subcooled boiling in vertical channel with volume of fluid method". ISME2015-23rd Annual International Mechanical Engineering Conference, Tehran, Iran (in Persian)

"Numerical Simulation of Phase Change Modeling Including Conjugate Heat Transfer". The 2nd Iranian Conference on Heat and Mass Transfer-ICHMT2014, Semnan University, Semnan, Iran

"Direct Numerical Simulation of Single Bubble Rising in Viscous Stagnant Liquid", International Conference on Mechanical, Automobile and Robotics Engineering (ICMAR'2012) Penang, Malaysia.

" Numerical Simulation of Convective Heat Transfer of Slug Flow in Micro Tube" 1th Iranian Conference on Heat and Mass Transfer-ICHMT2012, Zahedan, Iran

"A VOF Method to Phase Change Modeling" 1th Iranian Conference on Heat and Mass Transfer-ICHMT2012, Zahedan, Iran

### Selected Projects & Researches

2011-Present Numerical Simulation of Bubble Rising in Saturated Pool Boiling by Diffuse Interface Method, PhD Thesis

2011-Present Accomplish various numerical simulations as CFD Free lancer such as:

Numerical simulation of wind flow in urban area

Numerical simulation of blood flow in vein

Numerical simulation of natural heat transfer in solar chimney

Numerical simulation of pasteurization process of egg

Numerical simulation of molten pool during pulse laser

Numerical simulation of heat transfer in room (HVAC)

Numerical simulation of sediment behaviour in river bank

Numerical simulation of compressible flow around airfoil

Numerical simulation of submerged and surface piercing propeller

Numerical simulation of mould filling process

2009-2011 Numerical Simulation of boiling in micro tube, MSc. Thesis

2007 Design of water network based on graph Theory, BS.c project

2005 Design, construct, and study of the efficiency of solar cooker

### Achievements & Experiences

2009-present OpenFOAM instructor at IHA and at ISME

2010-2014 lecturer at Islamic Azad University Buin-Zahra branch

2008-2009 Teaching Assistant at Amirkabir University of Technology

2008 Ranked among the top 100 in the national MSc. entrance exam in mechanical Engineering

2004 Ranked among the top 1000 in the national BSc. entrance exam

### Skills

Computer Skills Effortless in Linux, and windows

Programming/Solver OpenFOAM, Fluent, C++, git, python,

Mesh Generation Salome, Gambit

Engineering Software Catia, PVElite

### References

Dr. M. R.Ansari: [mra\\_1330@modares.ac.ir](mailto:mra_1330@modares.ac.ir)

Dr. S. Tavangar: [tavanss@gmail.com](mailto:tavanss@gmail.com)