

C. V

A. Nouri-Borujerdi

Professor of Mechanical Engineering Department

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EDUCATION

Ph.D: Department of Mechanical Engineering, University of Wisconsin at Madison, USA.

M.Sc: Department of Mechanical Engineering, The University of Michigan, Ann-Arbor, USA.

B.Sc: Department of Mechanical Engineering, Iran University of Science and Technology, Tehran, IRAN.

RESEARCH INTEREST

Computational, analytical and experimental study in fluid mechanics, heat and mass transfer, convection, conduction, radiation and porous media, transport phenomena, two-phase flows as well as boiling and condensation

COURSES TAUGHT

Undergraduate Courses

- 1- Heat transfer I and II
- 2- Thermodynamics I and II
- 3- Fluid dynamics I and II
- 4- Refrigeration systems
- 5- Thermodynamics laboratory
- 6- Heat transfer laboratory

Graduate Courses

- 1- Computational fluid dynamics
- 2- Boundary layer theory
- 3- Conduction heat transfer
- 4- Convection heat transfer
- 5- Radiation heat transfer
- 6- Two-phase flows
- 7- Advanced Numerical methods

RECENT SELECTED JOURNAL PUBLICATIONS

Nouri-Borujerdi, A. and Ziaei-Rad M., 2008, Simulation of Natural Gas Flow in Buried Pipelines, *Trans. of ASME Journal of Fluid Engineering*, in press.

Nouri-Borujerdi, A. and Lavasani, A., 2008, Pressure Loss and Heat Transfer Characterization of a Cam-Shaped Cylinder at Different Orientations, *ASME Journal of Heat Transfer*.

Nouri-Borujerdi, A. and Fathi-Gishnegani, A., 2008, Numerical Simulation of Buoyancy Affected Turbulent Air Flow in a Room, *Journal of Scientia Iranica*, in press.

- Nouri-Borujerdi, A., Noghrehabadi, A.R., Rees, D.A.S, 2008, Influence of Darcy Number on the Onset of Convection in a Porous Layer with a Uniform Heat Source, *International Journal of Thermal Science*, Vol. 8, pp.840-848.
- Nouri-Borujerdi, A. and Nilli, A.M., 2007, Experimental Nusselt Number of Air Flow Between Rotor and Stator of a Generator, *Esteghlal Journal of Engineering*, Isfahan Univ. of Technology, Vol. 26, No. 1, pp. 1-11.
- Nouri-Borujerdi, A., Noghrehabadi, A.R., Rees, D.A.S, 2007, The Effect of Local Thermal Non-Equilibrium on Impulsive Conduction in Porous Media, *International Journal of Heat and Mass Transfer*, Vol. 50, No. 16, pp. 3244-3249.
- Nouri-Borujerdi, A., Noghrehabadi, A.R., Rees, D.A.S, 2007, The Linear Stability of a Developing Thermal Front in a Porous Medium: The Effect of Local Thermal Non-Equilibrium, *International Journal of Heat and Mass Transfer*, Vol. 50, and No. 16, pp. 3090-3099
- Nouri-Borujerdi, A. and Lavasani, A. M., 2007, Experimental Study of Forced Convection Heat Transfer from a Cam Shaped-Tube in Cross Flow, *International Journal of Heat and Mass Transfer*, Vol. 50, Issues 13-14, pp. 2605-2611
- Nouri-Borujerdi, A. and Lavasani, A. M., 2006, Flow Visualization Around a Non-Circular Tube, *International Journal of Engineering Transaction B: Applications*, Vol. 19, No. 1, December, pp. 73-82.
- Nouri-Borujerdi, A., Noghrehabadi, A.R., Rees, D.A.S., 2006, Onset of Convection in a Horizontal Porous Channel with Uniform Heat Generation Using a Thermal Non-Equilibrium Model, *Transport Porous Media*, DOI 10.1007/s11242-006-9076-1
- Nouri-Borujerdi, A., Noghrehabadi, A.R., Rees, D.A.S., 2006, The Effect of Local Thermal Non-Equilibrium on Conduction in Porous Channels with a Uniform Heat Source, *Transport Porous Media*, DOI 10.1007/s11242-006-9076-1.
- Nouri-Borujerdi A. and A. Lavasani, 2005, Heat Transfer Measurement of a Row Tube in a Channel with Mass Transfer. *Esteghlal Journal of Engineering*, Isfahan Univ. of Technology, Vol. 24, No. 1, pp. 315-325, Part 2.
- Raoufpanah, A., Rad, M., and Nouri-Borujerdi, A., 2005, Effects of Slip Condition on the Characteristic of Flow in Ice Melting Process, *International Journal of Engineering*, Vol. 18, No. 3, pp. 253-261.
- Nouri-Borujerdi, A. and Layeghi, M., 2005, Liquid Flow Analysis in Concentric Annular Heat Pipes Wicks, *Journal of Porous Media*, Vol. 8, No. 5, pp.471-480.
- Nouri-Borujerdi, A. and Layeghi, M., 2005, A Review of Concentric Annular Heat Pipes, *Journal of Heat Transfer Engineering*, Vol. 26, No. 6, pp.45-58.
- Nouri-Borujerdi, A. 2004, Analysis of Vacuum Venting in Die Casting, *Journal of Scientia*, Vol. 11, No. 4, pp.398-404.

Nouri-Borujerdi, A. and Goldak, J., 2004, Modeling of Air Venting in Pressure Die Casting Process, *Trans. of ASME, Journal of Manufacturing Science and Engineering*, Vol. 126, No. 3, pp. 577-581

Nouri-Borujerdi, A. and Layeghi, M., 2004, A Numerical Analysis of Vapor Flow in Concentric Annular Heat Pipes, *Trans. of ASME, Journal of Fluids Engineering*, Vol. 126, No. 3, pp.442-448.

Nouri-Borujerdi, A. and Layeghi, M. 2004, Vapor Flow Analysis in Partially-Heated Concentric Annular Heat Pipes, *International Journal of Computational Engineering Science*, Vol. 5, No. 1, pp.235-244.

Nouri-Borujerdi, A. and Layeghi, M., 2004, Fluid Flow and Heat Transfer Around Circular Cylinders in the Presence and Non-Presence of Porous Media, *Journal of Porous Media*, Vol. 7, No. 3, pp.239-247.

Nouri-Borujerdi, A., 2001, Analytical Modeling of Convective Condensation in Smooth Vertical Tubes, *Journal of Scientia Iranica*, Vol. 8, No. 2, pp.123-129.

Nouri-Borujerdi, A., 1998, Increasing of Cooling Tower Performance by Gas Injection, *Esteghlal Journal of Engineering*, Isfahan University of Technology, Vol. 17, No. 1, pp.143-152.

CONFERENCE PROCEEDINGS

Nouri-Borujerdi A, and Ebrahimi A., 2008, "Numerical Modeling of Non-Equilibrium Condensation in Horizontal Tubes", *The 19th International Symposium on Transport Phenomena*, 17-20 August, Reykjavik, ICELAND.

Nouri-Borujerdi A. and. Mirzaei A., 2008, "Dynamic Modeling of Two-Phase Expansion During Operation of Absorption Refrigerators", *Proceedings of the Fourth International Conference on Energy Research & Development*, November 17-19, KUWAIT.

Nouri-Borujerdi A. and Bahrami A., 2008, "Design of a Valveless Thermopneumatic Micropump with Effective Parameters on Actuation", *Proceedings of the Fourth International Conference on Energy Research & Development*, November 17-19, KUWAIT.

Ziaei Rad M, Nouri-Broujerdi A., and Seume J., 2008, "Numerical Computation of Compressible Laminar Flow with Heat Transfer in the Entrance Region of a Pipe", *ASME Summer Heat Transfer Conference, HT2008*, August 10-14, Jacksonville, Florida USA

Nouri-Borujerdi A. and Mirzaei A., 2008, Modeling of Components in Absorption Refrigeration Systems During Transient Operation, *The 7th Minsk International Seminar of Heat Pipes, Heat Pumps Refrigerators, Power Sources*, September 8-11, Minsk, BELARUS.

Nouri-Borujerdi, A. and Ziaei-Rad, 2007, "Numerical Prediction of Developing Flow in Gas Pipelines", *The 5th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics*, 1-4 July, Sun City, SOUTH AFRICA.

Nouri-Borujerdi, A. and Lavasani, A., 2007, "Drag of a Single Non-Circular Cylinder", *18th International Symposium on Transport Phenomena*, 27-30 August, Daejeon, SOUTH KOREA.

Nouri-Borujerdi, A. and Fathi, A., 2006, "Numerical Simulation of Buoyancy Affected Turbulent Air Flow in a Room", *Proceedings of 8th Int. Conference on Engineering System Design and Analysis*, July 4-7, 2006, Turino, ITALY.

Nouri-Borujerdi, A. and Lavasani, A., 2006, "Experimental Study of Cam-Shaped Tube in Cross Flow", *International Conference on Computational Fluid Dynamics, Acoustics, Heat Transfer and Electromagnetic*, CFEMATCON-06, July 24-25, Visakhapatnam, INDIA.

Nouri-Borujerdi, A., 2005, "Pressure Drop in Microchannel Subjected to wall Injection", *Proceedings of the Third Int. Conference on Energy Research & Development*, pp.418-427, Nov. 21-23, KUWAIT.

Nouri-Borujerdi, A., 2005, "Performance Characteristics of a Long Heat Pipe", *Proceedings of the VI Minsk Int. Seminar on Heat Pipes, Heat Pumps, Refrigerators*, pp. 293-299. Sept. 12-15, Minsk, Belarus.

Nouri-Borujerdi, A. and Nazari, M., 2005, "Analysis of Non-Thermal Equilibrium in Porous Media", *13th Annual Mechanical Engineering Conference of ISME*, May 19-21, Isfahan Univ. of Technology, IRAN.

Nouri-Borujerdi, A. and Lavasani, A., 2005, "Numerical Simulation of Fluid Flow Around a Cam Shaped-Cylinder", *13th Annual Mechanical Engineering Conference of ISME*, May 19-21, Isfahan Univ. of Technology, IRAN.

Nouri-Borujerdi, A., and Noghrehabadi, A. 2004, "Effective Thermal Conductivity of Three-Layer Cavity", *International of Mechanical Engineering Conference*, Dec. 5-8, KUWAIT.

Nouri-Borujerdi, A. and Ziaei-Rad, M., 2004, "Numerical Simulation of Transient Flow in Wind Tunnels", *7th Biennial Conference on Engineering Systems Design and Analysis*, July 19-22, Manchester, UK.

Nouri-Borujerdi, A. and Nabovati, A., 2004, "Numerical Study of Viscous Dissipation in Circular Microchannels", *12th Annual Mechanical Engineering Conference of ISME*, May 18-20, Tarbiat-Modarres, University, IRAN.

Nouri-Borujerdi, A. and Khiabani, R.H., 2004, "Numerical Study of Forced Convection in a Miniature Heat Exchanger", *Int. Symposium on Micro/Nano Scale Energy Conversion & Transport*, Aug. 8-13, Seoul National Univ. SOUTH KOREA.

Salehi, M., Sharifpour, M., Nouri-Borujerdi, A., Arefmanesh, A., 2003, "Ensemble Averaged Two-Phase Flow Numerical Simulation in Vertical Ducts for the Void Studing Behavior in BWRs", *11th International Conference on Nuclear Engineering*, ICONE-11, April 20-23, Shinjuku, Tokyo, JAPON.

Nouri-Borujerdi, A. and Djabbari, M., 2003, "Simulation of Turbulent Condensation in Horizontal Tubes Using VOF Method", *4th Baltic Heat Transfer Conference*, Aug. 25-27, Kaunas, LITHUANIA.

Nouri-Borujerdi, A. and Abdi, H., 2001, "Numerical Analysis of Heat and Mass Transfer in a Stratified Flow", *The 9th Annual Mechanical Engineering Conference of ISME*, May 27-29, Gilan Univ., IRAN.,

Nouri-Borujerdi, A. and Noghrehabadi, A., 2001, "Simulation of Turbulent Heat Transfer in Superheater", *9th Annual Mechanical Engineering Conference of ISME*, May 27-29, Gilan Univ., IRAN.

Nouri-Borujerdi, A., 2000, "Local Heat Transfer Coefficient During Annular Flow Condensation", *5th Biennial Conference on Engineering System Design & Analysis, ASME*, July 10-13, SWITZERLAND

Nouri-Borujerdi, A., 1998, "Non-Equilibrium Process of Boiling in Stratified Flow", *Proceedings of Int. Conference on Energy Research and Development, ICERD- Vol. 11*, pp. 1112-1121, Nov. 9-11, KUWAIT.

Nouri-Borujerdi, A., 1998, "Flow Boiling Heat Transfer in Horizontal Tubes", *Proceedings of the Third Biennial World Conference of Integrated Design and Process Technology, ASME*, Vol. 5, pp. 126-134, July, Berlin, GERMANY.

Nouri-Borujerdi, 1998, "Non-Equilibrium Process of Boiling in Stratified Flow", *The 6th Annual Mechanical Engineering Conference of ISME*, Iranian Science and Technology University, May 19-21, IRAN.

Nouri-Borujerdi, Sattari, S., 1996, "Mixed Convection for Developing Turbulent Flow in Vertical Pipes", *The 4th Annual Mechanical Engineering Conference of ISME*, Shiraz University, May 19-21, IRAN.

Nouri-Borujerdi, 1994, "Heat Transfer Boiling Flow Through Top Heated Horizontal Tubes", *The 2th Biennial Conference on Engineering System Design & Analysis, ASME*, PD-Vol. 64-1, London, UK.

NATIONAL CONFERENCES PROCEEDINGS (IN PERSIAN)

Nouri-Borujerdi, A., and Farsad, E., 2007, "Dynamic Simulation of Absorption Cooling System During Start-Up", *The 13th Annual Mechanical Engineering Conference of ISME*, Isfahan University of Technology, May 19-21.

Nouri-Borujerdi, A., and Nilly-Ahmadabadi, M., 2005, "Numerical Solution of Turbulent Flow in Between Two Concentric Cylinder with Rotating Inner Cylinder", *The 13th Annual Mechanical Engineering Conference of ISME*, Isfahan University of Technology, May 19-21.

Nouri-Borujerdi, A., and Mahgoub, S., 2004, "Integral Solution of Vapor Condensation and Mass Transfer in a Vertical Tube", *The 12th Annul Mechanical Engineering Conference of ISME*, Tarbiat-Modaress University, May 19-21.

Nouri-Borujerdi, A., and Lavasani, A., 2004, "Radiation Effect on Vaporization of Liquid Film Around a Cylinder in Cross Flow", *The 12th Annul Mechanical Engineering Conference of ISME*, Tarbiat-Modaress University, May 19-21.

Nouri-Borujerdi, A., and Bagher-Eskoei, A., 2004, "Numerical Solution of Fluid Flow Around a Cam Shaped–Tube Bank in Cross Flow", *The 12th Annul Mechanical Engineering Conference of ISME*, Tarbiat-Modaress University, May 19-21.

Nouri-Borujedi, A., and Ziaei-Rad, M., 2003, "Heat Transfer in Supersonic Diffusers", *The 5th National and Second International Conference of Iranian Aeronautical Society*, Aeronautical Research Centre, February 16-18.

Nouri-Borujerdi, A. and Noghreabadi, A., 2003, "Fluid Flow in a Three-Layer Enclosure", *The 8th Fluid Mechanics Conference*, Tabriz University, September 8-10.

Nouri-Borujerdi, A., and Lavasani, A., 2003, "Heat Transfer of a Row Tube by Vaporization Technique", *The 11th Annul Mechanical Engineering Conference of ISME*, Ferdouws-Mashhad University, May 13-15.

Nouri-Borujerdi, A., and Lavasani, A., 2002, "Vaporization of Liquid Film from a Tube Bank in Cross Flow", *The 4th Iranian Aeronautical Society Conference*, Amir-Kabir University, January 25-27.

Nouri-Borujerdi, A., and Falavand-Jouzani, 2002, "Estimation of Gas Velocity Effect on Heat Flux of Water Wall Tubes in a Power Plant Boiler", *The 10th Annul Mechanical Engineering Conference of ISME*, Kaje-h-Nasir-e-Din Toosi University, May 25-27.

Nouri-Borujerdi, A., and Mir-Fatah, A., 1999, "Combined Turbulent Natural and Forced Convection on a vertical Surface", *The 7th Annul Mechanical Engineering Conference of ISME*, Baluchestan University, May 15-17.

Nouri-Borujerdi, A., and Mirza-Bozorg, A., "Heat Transfer in Rough Pipes", *The 7th Annul Mechanical Engineering Conference of ISME*, Baluchestan University, May 15-17.

Nouri-Borujerdi, A., and Mostajiri, K., 1997, "Solution of Plume with Variable Concentration", *The 5th Annul Mechanical Engineering Conference of ISME*, Tabriz University, May 4-6.

Nouri-Borujerdi, A., 1995, "Effectiveness of Cross Flow in Heat Transfer and Pressure Loss in Core Reactor", *The Third Annul Mechanical Engineering Conference of ISME*, Amir-Kabir University, May 15-17.

HONORS AND AWARDS

- 1 Ph.D Thesis advisor to A.R. Noghrehabadi, winning the Best Ph.D Thesis Award from ISME, 2007.
- 2 Master Thesis advisor to M. Nilli-Ahmadabadi, winning the Best Master Thesis, Award from Ali- Nasab Foundation, ISME, 2005.
- 3 Master thesis advisor to S. Sattari, winning the Best Master Thesis, Award from Ali-Nasab Foundation, ISME, 1997.
- 4 Recipient the first prize, winning the best Research Project, Award from Electric Power Research Center, Tehran, Iran, 1996.
- 5 Recipient the first prize, winning the best Research Project, Award from Electric Power Research Center, Tehran, Iran, 1995.
- 6 Editorial Advisory Board Member of Journal of Recent Patents on Mechanical Engineering, Bentham Science Publishers.
- 7 Editor-in Chief of Journal of Technology & Education, Shahid Rajaei University, Tehran, Iran
- 8 Editorial Board Member of Journal of Isfahan Dental School, Isfahan University of Medical Sciences, Isfahan, Iran.

RESEARCH AND INDUSTRY CONTRACTS

- 1 Simulation of Accidents Consequences of Natural Gas Release in Pipelines, National Iranian Gas Company, Tehran, Iran, finished in 2007.
- 2 Experimental Investigation of Cooling Short Circuit Generator During Start Up/ Electric Power Research Center, Tehran, Iran, Finished in 2006.
- 3 Windows Design, Iranian Fuel Conservation Organization, Tehran, Iran, finished in 2005.
- 4 Reduction in Energy Consumption of Paint Cabinet / Internship project, Iran-Khodro Company, Tehran, Iran, finished in 2005.
- 5 Reduction in Water Consumption of Air Washer / Internship project, Iran-Khodro Company, Tehran, Iran, finished in 2005.
- 6 Experimental Investigation of Vacuum Influence on the Solar Collector Performance, Electric Power Research Center, Tehran, Iran, finished in 1998.
- 7 Advisor/Consultant to the Electric Power Research Center, Tehran, Iran, 1995-1998.
- 8 Advisor/Consultant to the National Iranian Lead and Zinc Co., Tehran, Iran, 1986-1989.

GRADUATE STUDENTS SUPERVISED

Dissertations Ph.D. Student

Lavasani, A.M., “ Air Flow and Heat Transfer Measurement Around a Cam-Shaped Tube”, Ph.D Thesis, *Islamic Azad University, Science and Science Branch*, September 2007.

Noghrehabadi, A.R., “Numerical Simulation of Local Non-Thermal Equilibrium Model in Porous Media, Ph.D Thesis, *Sharif University of Technology*, March 2007.

Layeghi, M., “Numerical Analysis of Concentric Annular Heat Pipes Performance”, Ph.D Thesis, *Sharif University of Technology*, March 2006

Ziaei-Rad A., "Numerical and Experimental Studies of Heat Transfer Effects on Flow Losses in Compressible Pipe Flow", in Progress.

Kebriaee A., "Numerical and Experimental Simulation of Injectors' Out Flow, in Progress.

Theses of M. Sc. Students

Motaghian N., Experimental Study of Natural Convection from a Tube Bundle in a Pool, M. Sc. Thesis, Feb. 2008.

Ebrahimi A., Simulation of Two-Phase Flow in a Horizontal Tube Under Non-Equilibrium Thermodynamics, M. Sc. Thesis, Feb. 2008.

Ahmadi R., Experimental Study of Onset of Nucleate Boiling in Annular Flow, M. Sc. Thesis, December 2006.

Tabatabaei E., Experimental Study of Critical Heat Flux in Research Reactor, M. Sc. Thesis, December 2006

Mahdavi-Far, J, Experimental Study of Turbulent Flow Between Rotor and Stator During Start Up, M. Sc. Thesis, November 2006.

Mehdizadeh S., Heat Transfer in Vessels and Liver Tissue, M. Sc. Thesis, July 2006

Farsad, E., "Dynamic Simulation of Absorption Cooling System During Start-up, M.Sc. Thesis, January 2006.

Mehdizadeh-Tehrani, S., “Heat Transfer in Living Tissue”, M.Sc. Thesis, Aug. 2006.

Hashemian, A., “Pressure Drop Measurement in an Axisymmetric Sudden Expansion”, M.Sc. Thesis, March 2006.

Saber, F., “Sensitivity Analysis of LiBr-Water Absorption Cycle”, M.Sc. Thesis, March 2006.

Fathi, A.R., “Simulation of Indoor Air Flow Natural Convection”, M.Sc. Thesis, Jan. 2006.

Kebriaee, A., “Numerical Simulation of Droplet Formation in Condensation Process”, M.Sc Thesis, Nov. 2005.

Nazari, M., "Numerical Solution of Non-Thermal Equilibrium Forced Convection in Porous Media", M.Sc. Thesis, Sept. 2005.

Nabovati, A., "Numerical Simulation of Transient Ice Formation of Turbulent Flow in Circular Pipes", M.Sc. Thesis, Nov. 2005.

Hanafizadeh, P., "Effect of Diameter to Length Ratio on Thermosyphon Performance", M.Sc. Thesis, Jan. 2005

Hashemi-Amin-Abadi, A., "Numerical Simulation of Liquid-Vapor Flow with Phase Change", M.Sc. Thesis, Nov. 2005.

Manafi, R., "Air Venting from Cavity in High Pressure Die Casting", M.Sc. Thesis, Jan. 2004.

Oskuie, A.B., "Numerical and Experimental Determination of Optimization Shape of Air Heater", M.Sc. Thesis, Nov. 2003.

Falavand-Jozaei, A., "Effect of Gas Velocity on Water-Wall Tube Heat Flux in a Power Plant Boiler", M.Sc. Thesis, Dec. 2001.

Jafarnia, A.R., "Numerical Solution of Turbulent Heat Convection Over Rough Surfaces", M.Sc. Thesis.

Amini,G., "The Influence of Interfacial Shear Stress Between Two Phases on Heat Transfer in a Stratified Co-Current Flow," M.Sc. Thesis.

Farahmanzad,H., "The Influence of Evacuated Space Between Glass and Absorber on Performance of a Solar Collector", M.Sc. Thesis.

Sattari, S., "The Influence of reheating Air on Performance of a Natural Draft Cooling Tower", M.Sc. Thesis.

Salehi,F., "Critical Heat Flux of Laminar Flow Through Subchannels of Rod Bundles", M.Sc. Thesis.

Mosavi, S.J., "Boiling Heat Transfer in Vertical and Horizontal Tubes", M.Sc. Thesis.

Eyzadi,F., "The Influence of Wall Heat Conduction on Condensation in Annular Flow", M.Sc. Thesis.

Fasyhzadeh,A., "Effects of Ambient Conditions on a Cooling Tower Performance", M.Sc. Thesis.

Saghafi, H., "Conjugate Boundary Layers with Wall Heat Conduction", M.Sc. Thesis.

Karbasi,H., "Unsteady Turbulent Compressible Flow in a Nozzle", M.Sc. Thesis.

Javadinezhad, S.R., "A Computer Programming for the Thermal Hydraulic Calculations of Small Breaks in a Vessel", M.Sc. Thesis.

Taheri-Shahraeini,A.R., "Thermal Analysis of the Steel Bins", M.Sc. Thesis.

Etedalizadeh, M.A., "Analysis of Radiation Heat Transfer in Boilers", M.Sc. Thesis.

Firooz,A.H., "Determination of Temperature and Thermal Stress of a Turbine Rotor due to the Friction Between Blade's Tip and Casing", M.Sc. Thesis.

Ayani,M.B., "Analysis and Determination of Skin Friction and Nusselt Number of a Supersonic Flow Over a Cone", M.Sc. Thesis.

Soltani-Hoseini,M., "Review of Equation of State and Determination of Virial Coefficient for Two-Phase Fluids", M.Sc. Thesis.

Solymanian,M., "An Analysis of Natural Convection Boundary Layer Solutions' Methods on a Vertical Flat Plate", M.Sc. Thesis.

Shojaei, F., "Pressure Drop and Heat Transfer in a Horizontal one Side Insulated Tubes", M.Sc., Thesis