Hamidreza Shahbazian

PERSONAL INFORMATION

Assistant Professor,
Faculty of Mechanical Engineering, University of Kashan, Iran

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EDUCATION

2013-2018 — **Iran University of Science and Technology (IUST)**, Tehran, Iran
Ph.D. Degree in Thermal/Fluid Mechanics-Energy Conversion
- Dissertation Title: "Investigation of Rotation and Centrifugal Buoyancy Effect on Gas Turbine Blade Internal Cooling". Supervisor: Prof. S.M. HosseinaliPoor
- GPA: 18.5/20

2004-2007 — **Isfahan University of Technology (IUT),** Isfahan, Iran
M. Sc. in Thermal/Fluid Mechanics-Mechanical Engineering
- Dissertation Title: "Numerical Simulation of NOx Formation/ Emission in an Industrial Gas Turbine 3D Combustors". Supervisor: Prof. M. D.Emami
- GPA: 16/20

2000- 2004 — **Shahid Beheshti University, Faculty of Engineering (SBU)**, Tehran, Iran
B. Sc. in Mechanical Engineering
- Dissertation Title: "Comparison of Evaporative Inlet Air Cooling Systems to Enhance the Gas Turbine Power Output and Efficiency". Supervisor: Prof. M. Ameri
- GPA: 17.3/20

RESEARCH INTERESTS

- Heat Transfer Enhancement & Heat Exchangers Optimization
- Gas Turbine & Blade Cooling Technology
- Renewable Energy, Solar Energy
- Applied Thermodynamic, CCHP & Power Plant
- Combustion & Environment

ACADEMIC PROFESSIONAL EXPERIENCES

2021-Now — **University of Kashan**, Kashan, Iran
Assistant Professor, Mechanical & Energy Department
- Lecture of Mechanical Courses and Energy Course
- Water, Energy and Environment Research Institute Council

2022-2024
Director of Technology Transfer and Intellectual Property Office
- Intellectual Property Committee
- Innovation and Commercialization Council

2019-2020 — **Iran University of Science and Technology (IUST)**, Tehran, Iran
Post-doctoral Research in Thermal Science
- Project: "Investigation of Rotation on Film Cooling Performance", Supervisor: Prof. S.M. HosseinaliPoor

2017-2018 — **Lund University (LTH), Department of Energy Science**, Lund, Sweden
Visiting Researcher in Heat Transfer Division
- Project: "Impact of Vortex Generators on Rotational Heat Transfer Enhancement". Supervisor: Prof. Bengt Sunden

RESEARCH & PROFESSIONAL EXPERIENCE

2020-Now

- **Electrical and Energy Industrial Engineering and Technology Co. (FASBA)**
  Project Manager
  - Design, engineering, consulting, supervision of the good implementation of the CHP system in the central building of Mapna, (Employer: Mapna- 2022)
  - Basic & Detail Design for DG & CHP for "Bamdad Badakhshan-CHP", "Pad-Alvan Pak-DG", "Babol Steel Company", "Hashgerd-DG".
  - The basic and detailed design of the test stand for the evaluation of the cooling system of the gas turbine blade for GT20 (Employer: Mapna- 2021~2022)
  - Fire extinguishing sys., sprinkler, spray, firebox Design for "Dafine-Museum", "Hamila Commercial Complex", "Behdash Chemical Co.", "Atiye-2 Hospital" (Employer: Modamkar Co- 2020~2023)
  - Transient response of Hamila's Fire Fighting piping system due to water hammer (Employer: Modamkar Co- 2022)
  - Design and modeling of the heating system for concrete curing process using the arrangement of hot water pipes (Employer: TozinElectric Industrial Group, Fard Iran- 2023~2024)
  - Detail Design for Heating, Cooling and air Ventilation for a Modern Greenhouse (Employer: Shaghayegh Sepid KASIAN Co-2021)
  - CFD Modeling for a Semi-Closed Greenhouse (Employer: Shaghayegh Sepid KASIAN Co-2022)

2016-2020

- **Parto Energy Persia Co.** Tehran, Iran
  Head of Mechanical Division & Project Manager
  - Basic & Detail Design, Purchase, Supervision on construction for 2×MWM-TCG2032-Gas Engines (4.3 MW) and 2×MWM-TVG2020-Gas Engines (1 MW)
  - Operation and maintenance for 2×MWM-TCG2032 and 3×MWM-TVG2020
  - Basic & Detail Design for 2×CATERPILLAR-G3616-Gas Engines (3.7 MW)
  - CHP and CCHP Basic Design for 2×GE Jenbacher-J616-Gas Engines (2 MW)

2014-2016
(Part Time)

- **Middle East Turbo Compressor Co., TurboTec. (OTC GROUP)**, Tehran, Iran
  Gas Turbine Expert at Turbomachinery department
  - Research on new technologies of GT blade internal cooling numerically and experimentally, which leads to gas turbine hot section upgrading.
  - Conceptual & Detail Design and Manufacturing of a Rotating Internal Cooling Test Stand (with IR Camera technology.

2009-2014

- **Monenco Iran Consulting Engineers Co. (MAPNA GROUP)**, the oldest consulting engineering company in the middle east, Tehran
  Research Assistant at R&D department
  - Cooperation in Basic & Detail Design of a Test station for 25 MW Industrial Gas Turbine and preparing its technical documents. (A joint with ZORYA Co, Ukraine).
  - Design and review of technical documents for Yazd Integrated Solar Combined Cycle Power Plant (A joint with ARIES company, Spain).
  - Feasibility Studies On Methane Collecting Equipment.
  - Verification of Ventilation Air Flux and Pressure Drops in Underground Subway Systems for Shiraz Subway.
  - Energy, Exergy and Economical analysis for repowering of Besat Power Plant (82.5 MW Steam turbine).

2007-2009 **Rotary & Process Expert at Mechanical Department** and involved with:
- Hydraulic & Thermal Calculation of the Auxiliary Cooling System in Power Plant.
- Design of Sea Water Main Cooling System for Pareh-Sar CCPP.
- Design Review of Main & Aux. Cooling Sys. Doc. for Damavand & Shirvan, CCPP.
- Utilities system Design (Steam and Cooling) in Isfahan Refinery Upgrading.

2006-2007 (Part Time)
- **Barin Energy Sepahan Consulting Engineers Co.**, Isfahan, Iran

Energy Specialist and involved with:
- Energy Saving & Energy Conservation for "Isfahan steel factory", "Zanjan Plumb & Zinc factory" and "an official Building"

2004-2005 (Part Time)
- **Niroo Research Institute (NRI)**, major research organization affiliated to the Ministry of Energy, Tehran, Iran

Research Fellow in Energy and involved with:
- Cooperation in the "Augmentation of gas turbine power output" project with Tavanir & Matn Co.
- Test Supervision for "Media & Fog" systems, which have been, installed in the Montazerghaem, Shahidrajaei and Shiraz power plants on behalf of Tavanir Co.

COURSE-WORK EXPERIENCE

2020-Now
- **University of Kashan, Mechanical and Energy Department**, Kashan, Iran

Lecture of Mechanical and Energy Courses

For Postgraduate levels
- Advanced Engineering Mathematics
- Advanced Mathematical Programming and Optimization
- Advanced Heat Exchanger Design
- Process Engineering Design

For Undergraduate levels:
- Classical Thermodynamics (I)
- Heat Transfer
- CHP and Thermal Power Plant Design
- Internal Combustion Engines and Workshop

2008-2014
- **Azad University, Engineering department**, Iran

Lecture of Mechanical Courses
- Heat Transfer (I) & (II)
- Fluid Mechanic (I) & (II)
- Classical Thermodynamic
- Thermal Power Plant
- Water Transportation System
- Air Conditioning and Refrigeration

2006-2008
- **PayameNoor University**, Kashan, Iran

Lecture of Academic Courses:
- Mechanic Physics (I)
- Magnetic & Electric Physics (II)
- Physics Laboratory (I)

2011-Now
- **Novinparsian Institute of Technology**, Tehran, Iran
- **Sorbon Academy Institute**, Tehran, Iran
- **Pardad Petrodanesh Institute (PTEC)**, Tehran, Iran
- **Falat Ghareh Institute of Technology**, Tehran, Iran

Lecture of Engineering Courses and Engineering Software:
- Fundamental rules and Preliminary concept of piping engineering
- Hydraulic Calculation in piping system

- Pipenet (Standard, Spray/Sprinkler & Transient module)
- Pipenet (Stand., Spray & Transient) held at Fajr Petrochemical Company (2014).
- Pipenet (Stand., Spray & Transient) held at Machine Sazi Arak Company (2015).
- Pipenet (Stand., Spray & Transient) held for TurboTec Company (2016).
- Pipenet (Stand., Sprinkler & Transient) held at Behran Oil Co. (2016).
- Pipenet (Stand., Sprinkler & Transient) held at Mapna MD1 Co. (2017, 2021)
- Pipenet (Standard, Sprinkler & Transient) held at Mapna MD2 Co. (2018, 2022)
- Pipenet (Stand., Sprinkler & Transient) held at Tehran CanyMes Co. (2019)
- Pipenet (Stand., Sprinkler & Transient) held at Zagros Petrochemical Co. (2021)
- Pipenet (Stand., Sprinkler & Transient) held at Pars Oil&Gas Co. (POGC) (2022)
- PFD & PID Training Course held at PTEC (2011).
- PFD & PID Training Course held at Farab Company (2012).
- PFD & PID Training Course held at Pasargad Taban Energy Company (2009).
- Power Plant Equipment Training Course held at Mapna MD2 Company (2023)
- Gas, and CCHP internal combustion engines at Tavana Energy Alborz Co. (2022)
- Gas Engines, Diesel engines, and CCHP at Yeganeh Paydar Asia Co. (2023 & 2024)
- Pipenet-Transient+ Water Hammering Simulation at Oil Design and Construction Company (ODCC) (2025)

SELECTED PUBLICATION

Journal Papers

1) Masoud Darabi, Abolfazl Fattahi, H.R. Shahbazian, “4E analysis and multi-objective optimization of hybrid solar-biomass ssisted combined cycle for power generation: A case study in Yazd, Iran”, Renewable Energy 267 (2026) 125676. (DOI: 10.1016/j.renene.2026.125676)

2) Alireza Sadooghi, Ali Aalianvari , H.R. Shahbazian, “Investigation of the Effect of Time-Dependent Viscosity on the Penetration of Cement Grout in Rock Fractures Using a Numerical Modeling Approach”, Journal of Hydraulic Structures, 2025; Vol. 12(3), PP. 40-53, 2025 (DOI: 10.22055/jhs.2025.49928.1354)

3) Alireza Sadooghi, Ali Aalianvari , H.R. Shahbazian, “Numerical Simulation of Grout Penetration in Rock Fractures Considering Time-Dependent Viscosity and Density Effects in Saline and Fresh Water Systems”, Journal of Mining and Environment, 2025, (DOI:10.22044/jme.2025.16963.3336)

4) M. Sharifian, H.R. Shahbazian, A. Rahimi, "Investigating the effect of greenhouse height on performance evaluation and the optimal temperature distribution inside the greenhouse using computational fluid dynamics", Energy Engineering and Management, Vol. 15, No. 1, PP. 34-49, 2025. (Doi.org/10.22052/EEM.2025.257306.1133)

5) H. Naghooni, A. Fattahi, H.R. Shahbazian, “Numerical Simulation of Using Impinging Jet In Solar Air Heaters In Order To Heat Transfer Enhancement”, Karafan Journal, Vol. 22, p. 317-343, 2025. (Doi.org/10.48301/kssa.2025.485570.3032)

6) Najmeh Hajialigol, A. Fattahi, H.R. Shahbazian, “A comprehensive, computational study framework of the influence of Aluminum Oxide nanoparticles on double-diffusive convection in a lid-driven enclosure”, International Journal of Nano Dimension, 2025, Vol 16, Issue 1, 162504 (1-12), (Doi.org/10.57647/j.ijnd.2025.1601.04)

7) Ashkan Rafiei, H.R. Shahbazian, G.A. Sheikhzadeh, “Numerical analysis of the effect of new matrix network structure technology to enhancement the internal heat transfer of gas turbine blades”, The Journal of Engine Research, 2024 Nov 21;71(3):56-76. (DOI: 10.22034/ER.2024.2047115.1070)

8) T. Moradi, H.R. Shahbazian, S.M. HosseinaliPoor, B. Sunden, “Effects of wavy ribs on vortex generation and thermal-hydraulic performance in a rotating rectangular channel”, Applied

Thermal Engineering, 2023, Vol. 222, (DOI: 10.1016/j.applthermaleng.2022.119952).

9) H.R. Shahbazian; S.M. HosseinaliPoor; Z. Jamshidi, "Thermo-Fluid Investigation on the Effect of Rotation on Film Cooling Performance at Pressure & Suction Side of the Leading-Edge of a Gas Turbine Blade", Journal of Solid and Fluid mechanics, 2022, Vol. 11, Iss. 5, PP. 133-148 (DOI:10.22044/jsfm.2021.9787.3204).

10) S.M. HosseinaliPoor, H.R. Shahbazian, B. Sunden, "Coriolis and Buoyancy Effects on Heat Transfer in Viewpoint of Field Synergy Principle and Secondary Flow Intensity for Maximization of Internal Cooling", Journal of Heat and Mass Transfer, 2021, (DOI:10.1007/s00231-020-02949-z).

11) S.M. HosseinaliPoor, P. Afkari, H.R. Shahbazian, B. Sunden, "A Numerical Framework for Heat Transfer and Pressure Loss Estimation of Matrix Cooling Geometry in Stationary and Rotational States", Journal of Numerical Heat Transfer. Part A: Applications-Taylor&Francis, 2019, VOL. 76, NO. 5, 348–368 (DOI:10.1080/10407782.2019.1630236)

12) S.M. HosseinaliPoor, H.R. Shahbazian, B. Sunden, "Experimental Investigations and Correlation Development of Convective Heat Transfer in a Rotating Smooth Channel", Experimental Thermal and Fluid Science, 94, 2018, PP. 316–328. (DOI: 10.1016/j.expthermflusci.2018.02.020)

13) S.M. HosseinaliPoor, H.R. Shahbazian, B. Sunden, "Influences of Secondary Flow Induced by Coriolis Forces and Angled Ribs on Heat Transfer in A Rotating Channel", International Journal of Numerical Methods for Heat and Fluid Flow, 2018, Vol. 29 Iss. 1, PP.388-417. (DOI: 10.1108/HFF-02-2018-0081)

14) S.M. HosseinaliPoor; H.R. Shahbazian; M. Ghobadi; S. Norouzi, "Aero-Thermal Analysis of Rotation and Rotational Buoyancy Effect on Internal Cooling of Gas Turbine Blade- An Experimental Study, Journal of Solid and Fluid mechanics, 2017, Vol. 8, Iss. 3, PP. 277-288. (DOI: 10.22044/JSFM.2018.7234.2664).

15) S.M. HosseinaliPoor; P. Afkari; H.R. Shahbazian, "Comparison of Various Arrangement Effects of V-Shape Rib Technologies on Turbulence and Heat Transfer Enhancement in Gas Turbine Blade Cooling", Modares Mechanical Eng. Journal, 2016, Vol. 16, No 5, PP 316-326. (DOR: 20.1001.1.10275940.1396.17.5.24.2)

16) M. D.Emami, H.R. Shahbazian, B. Sunden, "Effect of Operational Parameters on Combustion and Emissions in an Industrial Gas Turbine Combustor", ASME Journal of Energy Resources Technology, 2019, Vol. 141/012202-1. (DOI: 10.1115/1.4040532)

17) M. Ameri, H.R. Shahbazian, M. Nabizaded, "Comparison of Evaporative Inlet Air Cooling Systems to Enhance the Gas Turbine Generated Power" Int. Journal of Energy Research, 2007, Vol. 31, PP. 1483-1503. (DOI: 10.1002/er.1315)

18) M. Ameri, H.R. Shahbazian, H. Hosseinzadeh, M. Nabizaded, "Power Augmentation: A Fars Better Option", Middle East Energy Journal, MEE June 2006, PP 12-13, 2006.

Conference Papers

19) Angham Naif, **H.R. Shahbazian**, G.A. Sheikhzadeh, "Improved Performance Evaluation of a Solar Air Heater with Staggered Vortex Generators", *33rd Annual International Conference of Iranian Mechanical Engineers (ISME2025)*, 2025, Tehran, Iran

20) Abolfazl Entesari, **H.R. Shahbazian**, Seyyed Abdolmehdi Hashemi, "Investigating the Effect of Environmental Conditions (Temperature, Wind Speed) on the Power Output of Photovoltaic Panels Using Satellite Data," *33rd Annual International Conference of Iranian Mechanical Engineers (ISME2025)*, Iran University of Science and Technology, 2025, Tehran. (in Farsi)

21) Erfan Nazari, **H.R. Shahbazian**, Hossein Khorasani Zadeh, "Design of a Microgrid to Optimize and Enhance the Reliability of Heating, Cooling, and Electricity for the Central Building of the University of Kashan," *12th Iranian Conference on Renewable Energy and Distributed Generation*

(ICREDG2025), Qom University of Technology, 2024, Iran. (in Farsi)

22) **H.R Shahbazian**, "Correlation Development of The Internal Heat Transfer Nusselt Number under the Influence of Angular Ribs in Rotational Conditions for A Gas Turbine Blades", *32nd Annual (International) Conference on Mechanical Engineering-ISME2024*, 2024, Arak University, Arak, Iran (in Farsi).

23) A.H. Izadi; M. Nazififard; **H.R Shahbazian**, "Experimental and numerical study of the energy performance for CCHP of Kashan University, *31st Annual (International) Conference on Mechanical Engineering-ISME2023*, 2023, Shahid Beheshty University, Tehran, Iran (in Farsi).

24) **H.R. Shahbazian**; S.M. HosseinaliPoor, "Synergy analysis of the effect of 45, 60, 75 & 90 deg. ribs in increasing the heat transfer of gas turbine blades", *21st International Conference of Iranian Aerospace*, 2023, Iran University of Science & Technology, Iran (in Farsi)

25) T. Moradi; **H.R. Shahbazian**; M. Ghobadi; S.M. HosseinaliPoor, "Experimental study of the effects of various channel orientations on the heat transfer of a smooth rectangular rotating channel", *7th National Gas Turbine Conference*, 2022, Iran University of Science & Technology, Iran (in Farsi).

26) Z Jamshidi; S.M. HosseinaliPoor; **H.R. Shahbazian**, "Influence of Reynolds number on the cooling efficiency of the film on the gas turbine blade film Cooling in rotation mode", *7th National Gas Turbine Conference*, 2022, Iran University of Science & Technology, Tehran, Iran (in Farsi).

27) R. Khoshkhoo; **H.R. Shahbazian**; H. behroozi, "Feasibility study of using a compressor to prevent methane emissions in the Tie-in process and repairs (in point of view of economic & sustainable development)", *Proceeding of PSC 2018, 33rd International Power System Conference*, 2018, Tehran, Iran (in Farsi)

28) S. M. HosseinaliPoor; **H.R. Shahbazian**; P. Afkari, "Conceptual and Computational Analysis of Rotating Effect on Fluid Mechanics in Gas Turbine Blade Internal Cooling", *7th Conference on Rotating Equipment in Oil & Power Industries*, 2016, Tehran, Iran (in Farsi).

29) S. M. HosseinaliPoor; **H.R. Shahbazian**; P. Afkari, "Comparison of Thermal Performance of Dimpled and Rectangular Pin-Fin Cooling Methods at Different Reynolds Numbers in Internal Cooling Passages of Gas Turbine Blades", *2nd National Conference on Sustainable Development in Engineering Systems,* Iran University of Science and Technology, March 2017, Tehran, Iran. (in Farsi).

30) S.M. HosseinaliPoor; P. Afkari; **H.R. Shahbazian**, "Thermal Performance Comparison of Pin-Fin, Extended Fin & Rib Technologies with the Equivalent Surface on Internal Cooling", *5th National Gas Turbine Conference*, 2016, Iran University of Science & Technology, Tehran, Iran (in Farsi).

31) S.M. HosseinaliPoor; **H.R. Shahbazian**; E. Saadati, "Thermodynamic Simulation and Energy/Exergy Analysis of Repowering of Besat Thermal Power Plant", *Proceeding of 1st conference of sustainable development in energy, Water and Environment*, 2015, Iran University of science & Technology, Thern, Iran (in Farsi).

32) M.R. Hosseini; **H.R. Shahbazian**; M. Najmi, "Design of a Test rig for a 25 MW Gas Turbine in order to mechanical & performance test, submission of Experimental Results and Uncertainty Analysis", *Proceeding of IPG5, 5th conference of Thermal Power Plant (Mapna)*, June 2014, Shahid Beheshti University, Tehran, Iran (in Farsi).

33) S. Amini; R. Khoshkhoo; **H.R. Shahbazian**, "Technical-Economical study on emitted methane collection during pipeline repairs on Boshehr province", *Proceeding of IPG5, 5th conference of Thermal Power Plant (Mapna)*, June 2014, Shahid Beheshti University, Tehran, Iran (in Farsi).

34) M. D.Emami; **H.R. Shahbazian**, Niyayesh Farahmand, "Numerical Simulation for Investigating Different Prompt NOx Models in a Turbulent Non-Premixed Hydrocarbon Jet Flame," *6th*

Conference on Thermal Power Plants (Gas, Combined Cycle, Thermal), December 2015, Iran University of Science and Technology, Tehran, Iran. (in Farsi)

35) M. D.Emami; **H.R. Shahbazian**, "Numerical Simulation of Combustion and NOx Formation/Emission in a 3D Combustor of Industrial Gas Turbine", Proceedings *of The U.S.-Iran Symposium on Air Pollution in Megacities,* The Beckman Center of the National Academy of Sciences and Engineering Irvine, California, September 3-5, 2013, California, USA.

36) **H.R. Shahbazian**; H. PahlavanZadeh; H.R. Razavi, "Energy and Exergy analysis of a Combined Cold, Heat & power system for a typical residential complex", proceeding of CCHP2013, Iranian conference on power generation and hybrid system, Energy Research Institute, University of Kashan, August 2013, Kashan, Iran (in Farsi).

37) **H.R. Shahbazian**, "Comparison of air flow swirly angle effect on an engine combustion product" *Proceeding of EPGC4 2012, 4th Electric Power Generation Conference*, January 2012, Tehran, Iran (in Farsi).

38) M. D.Emami; **H.R. Shahbazian**, "Comparison Between the Performance of Different Thermal-Nox Mechanisms in a turbulent jet", *Proceeding of ICC2008, 2nd Combustion Conference of Iran*, 2008, Mashhad, Iran (in Farsi) .

39) M. D.Emami; **H.R. Shahbazian**, "Numerical Simulation of NOx Formation and Emission in A Turbulent Non-Premixed CH4/N2/H2 Diffusion Flame", *5th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, HEFAT2007*, Sun City, South Africa.

40) M. D.Emami; **H.R. Shahbazian**; N. Farahmand**, "**Prediction of Thermochemical Quantities in Laminar Flamelet Models", *Proceeding of ISME 2007, 15th Annual (International) Conference on Mechanical Engineering-ISME2007*, May 2007, Amirkabir University of Technology, Tehran, Iran (in Farsi).

41) M. D.Emami; **H.R. Shahbazian**, "Investigation on Excess Air effect in NOx Generation inside a Gas Turbine Combustor" *Proceeding of PSC 2007, 22nd International Power System Conference*, 2007, Tehran, Iran (in Farsi).

42) M. D.Emami; **H.R. Shahbazian**; H. Afshin*,* "Nitrogen Dioxide Simulation in a simple combustion chamber"*, Proceeding of ICHECLL11 2006,* 11th Congress of Iranian Chemical Engineering, 2006, Tarbiat Modares University, Iran, Tehran, Iran (in Farsi).

43) A. Sedaghat; **H.R. Shahbazian**, "CFD Simulation of baffle effect on instability combustion", *Proceeding of FD2006, 10th Fluid dynamic Conference*, 2006, Yazd university, Iran, (in Farsi).

44) M. Ameri; **H.R. Shahbazian**; H. HoseinZadeh, "The Study of Media Evaporating Coolers for Fars Combined Cycle Power Plant and Presentation of Performance Test Results", *Proceedings of the International Conference on Recent Advances in Mechanical & Materials Engineering*, May 2005, Kuala Lumpur, Malaysia.

45) M. Ameri; H. Nabati; A. Keshtgar; M. Nabizadeh, **H.R. Shahbaziyan***,* "The Installation & Testing of The Fog Inlet Air Cooling System for the Shahid Rajaei Combined Cycle Power Plant", *Proceedings of Thermo2005*, 2005, Hungary.

46) M. Ameri; **H.R. Shahbazian**; H. HoseinZadeh; M. Nabizaded, "Thermodynamic simulation, Technical and Economic Analysis of Evaporating Coolers for Fars CCPP" *Proceeding of PSC 2004, 19nd International Power System Conference*, 2004, Tehran, Iran (in Farsi).

47) M. Ameri; **H.R. Shahbazian**; H. HoseinZadeh, "The Study of Effect of Gas Turbine Inlet Air Cooling on the Heat Recovery Boiler Performance" *Proceedings of ESDA04, 7th Biennial Conference on Engineering Systems Design and Analysis*, July 2004, Manchester, UK.

48) M.Ameri; **H.R.Shahbazian**; M. Nabizaded; H. HoseinZadeh, "Application of the Advanced Tubes

for Steam Power Heaters & Condensers", *Proceedings of IMEC2004, International Mechanical Engineering Conference*, December 2004, Kuwait.

49) M. Ameri; M.R. Taghipour; Y. Yusefi; **H.R. Shahbazian**; S.R. Shamshirgaran, "The Study of Effective Factors on the Critical States in Steam Power Plant Boilers", *Proceedings of International Mechanical Engineering Conference* (imece2004), Dec. 2004, Kuwait.

PATENT

- Patent No: 103945 (06.Mar. 2021), "Gas turbine blade film cooling test stand in rotation state". Iranian patent and trademark office.
  H.R. Shahbazian, S.M. HosseinaliPour, Zohre Jamshaidi

INTERNATIONAL COLLABORATION

Since 2017 ➢ Professor, Bengt Sunden
Lund University (LTH), Department of Energy Science, Lund, Sweden