



## Samira Payan

### Associate Professor

Faculty : Engineering

Departments : Mechanical Engineering

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## Education

- ✓ B.Sc, Mechanical Engineering - Mechanics in Heat and Flu,Sistan and Baluchestan University - 2005
- ✓ MS, Mechanical Engineering-Thermo Fluids,Sistan and Baluchestan University - 2008
- ✓ PhD, Mechanical Engineering-Thermo Fluids,Sistan and Baluchestan University - 2013
- ✓ PhD, Mechanical Engineering-Thermo Fluids,Sistan and Baluchestan University - 2013

## Courses

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|---|-----------------------------|
| 1. Environment Pollution Control              | 2. Heat Transfer 2          |
| 3. Heat Ventilation Air Conditioning (HVAC) 1 | 4. Heat Transfer Laboratory |
| 5. Advanced Numerical Analyses                | 6. Radiation Heat Transfer  |
| 7. aen teghal2                                | 8. Heat Transfer 1          |
| 9. Advanced Heat Exchangers Design            | 10. Combustion chambers     |
| 11. transfer                                  | 12. Advanced Mathematics 2  |

## Thesis

## Master Thesis

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### 1. The effect of fluid flow on the distribution and amount of thermal stresses and strains in the engineering problems

مجتبي حسيني [Ali Hatami, Samira Payan]

نیمسال اول سال تحصیلی 98-99

### 2. The effect of fluid flow on the distribution and amount of thermal stresses and strains in the engineering problems

مجتبي حسيني [Ali Hatami, Samira Payan]

نیمسال دوم سال تحصیلی 97-98

### 3. The effect of fluid flow on the distribution and amount of thermal stresses and strains in the engineering problems

مجتبي حسيني [Ali Hatami, Samira Payan]

نیمسال اول سال تحصیلی 97-98

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## Journals Papers

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### 2021

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#### 1. Semi-transient thermal analysis from MHD-Participating fluid into a square cavity with variable optical thickness

Sedigheh Parsaei, Samira Payan, Amir Payan

INTERNATIONAL JOURNAL OF THERMAL SCIENCES Volume: (169) 107072-1 - 107072-19

### 2020

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#### 2. Numerical investigation of turbulent heat transfer enhancement using combined propeller-type turbulator and nanofluid in a circular tube

, Amin Behzadmehr, Samira Payan

JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY Volume: (140) 1029 - 1044

#### 3. Effect of Trapezoidal Geometry of Cross-Section of Annular Fin on Thermal Stresses and Strains

Ali Hatami, Samira Payan, Mojtaba Hosseini

Journal of Mechanical Engineering Research and Developments Volume: (43) 271 - 282

#### 4. Numerical investigation of an innovative discontinuous distribution of fins for solidification rate enhancement in PCM with and without nanoparticles

Iman Sarani, Samira Payan, S.A. Nada, Amir Payan

APPLIED THERMAL ENGINEERING Volume: (176) 1-115017 - 18-115017

#### 5. Numerical analysis of thermal stresses and strains of annular finned tube bundle in turbulent flow regime

Ali Hatami, Samira Payan, Mojtaba Hosseini

Mechanics and Industry Volume: (21) -

#### 6. Enhancement of energy storage capability in RT82 phase change material using strips fins and metal-oxide based nanoparticles

Iman Sarani, Samira Payan, Amir Payan, Sameh A. Nada

Journal of Energy Storage Volume: (32) 102009-1 - 102009-16

#### 7. Numerical Analysis of Thermal Multilayer Insulations with carbon nanofiber spacers

Sayyed abbas Talebi, Amin Behzadmehr, Samira Payan

Volume: (49) 145 - 154

#### 8. Comparison of the effect of laminar and turbulent flow regimes on thermal stresses and strains in an annular fin

Mojtaba Hosseini, Ali Hatami, Samira Payan

Journal of Mechanical Science and Technology Volume: (34) 413 - 424

9. Simultaneous reconstruction of nonlinear temperature-dependent properties in a 1D radiation-conduction medium

Mehdi Pakdaman, Samira Payan, seyed masoud Hosseini Sarvari, Soheila Mohammadpour

INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER Volume: (119) 104983- 1 - 104983 -33

10. The Solution of the Transient Diffusion-Radiation Binary Gas mixture Problem in Low Pressure Values between Two Flat Plates at a Gray Medium

Soheila Mohammadpour, Samira Payan

Amirkabir Journal of Mechanical Engineering Volume: (52) 1687 - 1704

11. Simultaneously Reconstruction of Radiation-Conduction Properties of Nanomaterial Thermal Insulators with Particle Swarm Optimization Algorithm

Mehdi Pakdaman, Samira Payan, seyed masoud Hosseini Sarvari, Soheila Mohammadpour

Amirkabir Journal of Mechanical Engineering Volume: (52) 2551 - 2568

## 2019

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12. Investigating the Effect of radiation scattering and Surface Emission on Combined Convection Heat Transfer in an Enclosure with Moving Insulation surface

Naiem Mehrjoy Bazinasab, Samira Payan

Amirkabir Journal of Mechanical Engineering Volume: (50) 1289 - 1302

13. Effect of fin thickness, grooves depth, and fin attachment angle to the hot wall on maximum heat transfer reduction in a square enclosure

Masood Rafie, Samira Payan

INTERNATIONAL JOURNAL OF THERMAL SCIENCES Volume: (136) 473 - 490

14. The Increase of Efficiency of Bundle of Circular Finned-tubes with Change of Shape and Geometrical Parameters in Turbulent Flow

Samira Payan, Faezeh Imani, Mojtaba Hosseini

Volume: (8) 95 - 111

## 2018

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15. Synthesis and characterization of titanate nanotube/single-walled carbon nanotube (TNT/SWCNT) porous nanocomposite and its photocatalytic activity on 4-chlorophenol degradation under UV and solar irradiation

, , , , Samira Payan

APPLIED SURFACE SCIENCE Volume: (434) 336 - 350

16. Minimization of rate of heat transfer from rectangular cavities with free convection in various aspect ratios for finding of characteristics of an array of adiabatic thin fins by PSO algorithm

Samira Payan,

Amirkabir Journal of Mechanical Engineering Volume: (50) 295 - 308

17. Effect of Insulated up and Down Lid Motion on the Heat Transfer of a LidDriven Cavity with an Attached Fin

Samira Payan,

Volume: (19) 99 - 126

## 2017

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18. Optimization of characteristics of an array of thin fins using PSO algorithm in confined cavities heated from a side with free convection

, Samira Payan

APPLIED THERMAL ENGINEERING Volume: (110) 1371 - 1388

## 2016

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19. Enhancement of heat transfer of confined enclosures with free convection using blocks with PSO algorithm

, Samira Payan

APPLIED THERMAL ENGINEERING Volume: (101) 79 - 91

20. Enhancement of Efficiency of Circle Tube Banks Using Change of Shape of Tubes in a Special Row with Turbulent Flow.

Samira Payan, Faezeh Imani

Volume: (4) 11 - 18

## 2015

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21. Enhancement of Efficiency of Circle Tube Banks Using Change of Shape of Tubes in a Special Row with Turbulent Flow

Samira Payan, Faezeh Imani

Volume: (4) 11 - 18

22. RECONSTRUCTION OF TEMPERATURE DISTRIBUTION IN THE COMBUSTION REGION OF A NON-GRAY MEDIUM

Samira Payan, , Amin Behzadmehr

NUMERICAL HEAT TRANSFER PART A-APPLICATIONS Volume: ( ) 908 - 924

23. طراحی مرزى معكوس مسئله جابجايى اجبارى متلاطم بين سطوح موازى با تابش سطحى

, Samira Payan, ,

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HEAT TRANSFER ENGINEERING Volume: () -

2014

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طراحی تابشی معکوس مرزی محفظه های احتراقی با محیط جذب کننده- صادر کننده غیر. 24.  
خاکستری

Samira Payan, , Amin Behzadmehr

NUMERICAL HEAT TRANSFER PART A-APPLICATIONS Volume: (65) 1114 - 1137

## Conferences Papers

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2020

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1. the effect of eccentricity on thermal stresses over annular fin in cross flow

Mohammad Abbasi shirg, Samira Payan, Mojtaba Hosseini

2018

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2. estimation of absorption scattering and conduction coefficients s in a inverse conduction-  
radiation problem in the transparent medium

3rd international conference on mechanical and aerospace engineering

Mehdi Pakdaman, Samira Payan, seed masoud hossaini sarvari, Soheila Mohammadpour

## Executive activities

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مدیر گروه استعدادهاي درخشان

from 1399/06/22 - to 1401/06/18

## Research Project

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1. Effect of radiative equilibrium on inverse boundary design problems in regular and irregular  
geometr

Samira Payan -