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**PhD, Mechanical Eng., Thermofluid,**  
**UNB, Canada (1997)**

**MSc., Mechanical Eng., Energy convergen,**  
**Ferdowsi univ. of Mashhad, Iran (1988)**

**BS, Mechanical Eng., Energy conversion,**  
**Technical Univ. of Sharif & Ferdowsi univ.**  
**of Mashhad, Iran (1985)**

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## Honors

**First rank in national scientific exam for study abroad**

**First rank in PhD program**

**Best supervisor of MSc thesis (Kashani), ISME, 2005**

**Best supervisor of MSc thesis (Gharaii), ISME, 2005**

**Best supervisor of MSc thesis, ICS, 2006**

**Second rank of books, Heat transfer, Ferdowsi Festival, 2005**

**Best supervisor of MSc thesis, ICS, 2008**

**Best supervisor of PhD thesis, ICS, 2007**

**Best author, Ferdowsi university of Mashhad, 2008**

**Best supervisor of MSc thesis (Koohi), ISME, 2009**

**Second rank of books, Convection, Ferdowsi Festival, 2009**

**Second rank of research, Ferdowsi Festival, Feb. 2012**

**Best supervisor of PhD thesis (3<sup>rd</sup> rank), Ferdowsi Festival, Feb. 2012**

**Best supervisor of MSc thesis (Ejtehadi), ISME, 2013**

## **Members:**

Director of Center of Excellence in Energy Management, Certified by National Iranian Oil Company (NIOC)

Centre of excellence in linear and non linear system, Ferdowsi university of Mashhad

Centre of excellence in energy conversion, Sharif university of Tehnology,

Iranian combustion society,

Iranian society of Mechanical Eng.,

International centre for SDEWES

**Editorial Board:** Iranian combustion Journal

International Review of Chemical Engineering (IRECHE)

Journal of Heat and Mass Transfer Research(JHMTR)

**MEMBERS OF THE INTERNATIONAL SCIENTIFIC COMMITTEE:**

1st WSEAS International Conference on FINITE DIFFERENCES - FINITE ELEMENTS - FINITE VOLUMES - BOUNDARY ELEMENTS (F-and-B'08) Malta, September 11-13, 2008

**SCIENTIFIC ADVISORY BOARD:**

- 6th Dubrovnic conference on sustainable development of energy water and environment system SDEWES, UNISCO, Dubrovnik, Croatia, 2011
- The 7th *Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference*, Ohrid, Macedonia 2012
- The 8th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, Dubrovnik, Croatia, 2013
- 9th Conference on Sustainable Development of Energy, Water and Environment Systems– SDEWES Conference, Dubrovnik, Croatia, 2014
- 1st South East European Conference on Sustainable Development of Energy, Water and Environment Systems - SEE SDEWES Ohrid 2014
- 9th Conference on Sustainable Development of Energy, Water and Environment Systems, Venice-Istanbul, 2014
- 10th Conference on Sustainable Development of Energy, Water and Environment Systems– SDEWES Conference, Dubrovnik, Croatia, 2015
- 

**Scientific chair:** Iranian thermal Science conference, Mashhad, Jan., 2011

**Program Technical Committee**

3rd ScienceOne International Conference on Environmental Sciences ICES 2014, Dubai, January 21-23, 2014

Spring World Congress on Engineering and Technology (SCET 2015), china, 2015

4th ScienceOne International Conference on Environmental Sciences, (ICES2015), Dubai, January 21-23, 2015.

*Interests*

- *Modeling and Simulation of Industrial Process*
- *Heat and Mass Transfer*
- *Numerical Heat Transfer*
- *Combustion, air pollution, and safety*
- *Energy*

## *Lectures*

- Heat Transfer
- Transport Phenomena
- [Conduction Heat Transfer](#) (Graduate)
- Convection Heat Transfer (Graduate)
- Radiation Heat Transfer (Graduate)
- Computational Fluid Mechanics (Graduate)
- Similarity Solution (Graduate)
- Exergy Optimization
- Introduction to CFD (undergraduate)

## *Workshops and Industrial short courses:*

Energy management, Ministry of Energy, Mashhad, 1999

Energy management, Ministry of Industry and Mines, Mashhad, 2001

Energy management, Ministry of Industry and Mines, Mashhad, 2002

Heat exchanger audit and management in power plant, Ministry of energy, 2010

Heat exchanger audit and management in power plant, Ministry of energy, 2011

Transient gas flow in pipeline, Khorasan razavi Gas co., 2013

Industrial Burners: Khorasan razavi Gas co., 2013

Modelling of fluid dynamics, ISME Khorasan razavi branch, 2014

## *Industrial Research*

Energy management of Ramin power plant, Advisor, 2012

Numerical analysis of gas leakage from pipeline, Khorasan Razavi gas Co., 2012

Thermal design of generator, Tavanir, 2005

Feasibility study of changing hardware and software of control system of air cooler in Toos power plant, Toos power plant, 2005

Effect of Bond number on performance of thermosyphon, FUM, 2004

Effect of design parameter on performance of air filter of truck, Tavan filter, 2003

Thermal design of switching board of Mashhad power plant, Mashhad power plant, 2003

Effect of parameter on production of ball joint, Partsazan, 2002

Thermal design of 90 kW electrical motor, JEMCO, 1991

Design of Hatch Back Renault and experimental analysis of fluid flow around of car, Sistan and Baluchestan University, 1990

## Journal Papers

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- Javad Abolfazli Esfahani , **Control of interaction between MHD and nanofluid for thermal and drag management by RSM** , Journal of Thermophysics and Heat Transfer , 2016-12
- Javad Abolfazli Esfahani , seyed mohammad vahidhosseini , ebrahim barati , **Green's function method (GFM) and mathematical solution for coupled equations of transport problem during convective drying** , Journal of Food Engineering , 2016-12
- Saman Rashidi , M. Bovand , Javad Abolfazli Esfahani , **Optimization of partitioning inside a single slope solar still for performance improvement** , Desalination , Volume ( 395 ) , 2016-10, Pages 79-91
- SAJJAD AMIR AHMADI , Saman Rashidi , Javad Abolfazli Esfahani , **Minimization of Exergy Losses in a Trapezoidal Duct with Turbulator, Roughness and Beveled corners** , Applied Thermal Engineering , 2016-10
- Javad Abolfazli Esfahani , Javad Alinejad , **Taguchi design of three dimensional simulations for optimization of turbulent mixed convection in a cavity** , Meccanica , 2016-9
- Reza Kamali , Seyed M Mousavi , Ali R Binesh , Javad Abolfazli Esfahani , **Large eddy simulation of the flameless oxidation in the IFRF furnace with varying inlet conditions** , International Journal of Spray and Combustion Dynamics , 2016-9
- Iman Zeynali , Javad Abolfazli Esfahani , Kambiz Vafai , **Effect of nanoparticles on condensation of humid air in vertical channels** , International Journal of Thermal Sciences , 2016-9
- Saeedreza Zeibi Shirejini , S. Rashidi , Javad Abolfazli Esfahani , **Recovery of drop in heat transfer rate for a rotating system by nanofluids** , Journal of Molecular Liquids , Volume ( 220 ) , 2016-8, Pages 961-969

1. M. Bovand , Saman Rashidi , Javad Abolfazli Esfahani , [\*\*A new design of Ranque-Hilsch vortex tube:helical multi-intakevortex generator\*\*](#) , Journal of Thermophysics and Heat Transfer , 2016-6
2. Saman Rashidi , Javad Abolfazli Esfahani , Mohammad Sadegh Valipour , Masoud Bovand , Ioan Pop , [\*\*Magnetohydrodynamic effects on flow structures and heat transfer over two cylinders wrapped with a porous layer in side\*\*](#) , International Journal of Numerical Methods for Heat and Fluid Flow , Volume ( 26 ) , 2016-6, Pages 1416-1432
3. Nader Rahbar , Javad Abolfazli Esfahani , Amin Asadi , [\*\*An experimental investigation on productivity and performance of a new improved design portable asymmetrical solar still utilizing thermoelectric modules\*\*](#) , Energy Conversion and Management , Volume ( 118 ) , 2016-6, Pages 55-62
4. M. Bovand , Saman Rashidi , Javad Abolfazli Esfahani , R. Masoodi , [\*\*Control of wake destructive behavior for different bluff bodies in channel flow by magnetohydrodynamics\*\*](#) , European Physical Journal Plus , Volume ( 131 ) , 2016-6, Pages 1-13
5. Saman Rashidi , Masoud Bovand , Javad Abolfazli Esfahani , Goodarz Ahmadi , [\*\*Discrete particle model for convective AL<sub>2</sub>O<sub>3</sub>-water nanofluid around a triangular obstacle\*\*](#) , Applied Thermal Engineering , Volume ( 100 ) , 2016-5, Pages 39-54
6. H.R. Karbasian , Javad Abolfazli Esfahani , E. Barati , [\*\*The power extraction by flapping foil hydrokinetic turbine in swing arm mode\*\*](#) , Renewable Energy , Volume ( 88 ) , 2016-4, Pages 130-142
7. M. Bovand , Saman Rashidi , Javad Abolfazli Esfahani , S.C. Saha , Y.T. Gu , M. Dehesht , [\*\*Control of flow around a circular cylinder wrapped with a porous layer by magnetohydrodynamic\*\*](#) , Journal of Magnetism and Magnetic Materials , Volume ( 401 ) , 2016-3, Pages 1078-1087
8. Saman Rashidi , M. Bovand , Javad Abolfazli Esfahani , [\*\*Opposition of Magnetohydrodynamic and AL<sub>2</sub>O<sub>3</sub>-water nanofluid flow around a vertex facing triangular obstacle\*\*](#) , Journal of Molecular Liquids , Volume ( 215 ) , 2016-3, Pages 276-284
9. reza parizadlaein , Saman Rashidi , Javad Abolfazli Esfahani , [\*\*Experimental investigation of nanofluid free convection over the vertical and horizontal flat plates with uniform heat flux by PIV\*\*](#) , Advanced Powder Technology , Volume ( 27 ) , 2016-3, Pages 312-322
10. Ali Norouzi , Javad Abolfazli Esfahani , [\*\*Capturing non-equilibrium effects of micro/nano scale gaseous flow using a novel lattice Boltzmann model\*\*](#) , Journal of Statistical Physics , Volume ( 162 ) , 2016-2, Pages 712-726
11. BIJAN DARBARI , Saman Rashidi , Javad Abolfazli Esfahani , [\*\*Sensitivity Analysis of Entropy Generation in Nanofluid Flow inside a Channel by Response Surface Methodology\*\*](#) , Entropy , Volume ( 18 ) , 2016-2, Pages 1-16
12. Javad Abolfazli Esfahani , E. Barati , hamid reza karbasian , [\*\*Effect of acceleration on dynamic stall of airfoil in unsteady operating conditions\*\*](#) , Wind Energy , 2015
13. Javad Abolfazli Esfahani , M. Bovand , Saman Rashidi , H. F. Oztop , R. Masoodi , [\*\*Control of Wake Structure Behind a Square Cylinder by\*\*](#)

- [Magnetohydrodynamics](#) , Journal of Fluids Engineering , Volume ( 137 ) , 2015-6, Pages 61102-61103
14. Javad Abolfazli Esfahani , hamid reza karbasian , ebrahim barati , [Proposed kinematic model for fish-like swimming with two pitch motions](#) , Ocean Engineering , Volume ( 104 ) , 2015-8, Pages 319-328
  15. Ali Norouzi , Javad Abolfazli Esfahani , [Two relaxation time lattice Boltzmann equation for high Knudsen number flows using wall function approach](#) , Microfluidics and Nanofluidics , Volume ( 18 ) , 2015-2, Pages 323-332
  16. M. Bovand , Saman Rashidi , Javad Abolfazli Esfahani , [Enhancement of heat transfer by nanofluids and orientations of the equilateral triangular obstacle](#) , Energy Conversion and Management , Volume ( 97 ) , 2015-6, Pages 212-223
  17. Javad Abolfazli Esfahani , ebrahim barati , hamid reza karbasian , [Fluid structures of flapping airfoil with elliptical motion trajectory](#) , Computers and Fluids , Volume ( 108 ) , 2015-2, Pages 142-155
  18. Javad Abolfazli Esfahani , Vahid Hoseini , ebrahim barati , [Three-dimensional analytical solution for transport problem during convection drying using Green's function method \(GFM\)](#) , Applied Thermal Engineering , Volume ( 85 ) , 2015-6, Pages 264-277
  19. Javad Abolfazli Esfahani , Nader Rahbar , Ehsan Fotouhi-Bafghi , [Estimation of convective heat transfer coefficient and water-productivity in a tubular solar still – CFD simulation and theoretical analysis](#) , Solar Energy , Volume ( 113 ) , 2015-3, Pages 313-323
  20. sayyed aboozar fanaee , Javad Abolfazli Esfahani , [The analytical modeling of hydrogen-air mixture in a catalytic micro-channel](#) , Journal of Thermophysics and Heat Transfer , 2015
  21. Iman Zeynali , Javad Abolfazli Esfahani , Hamid Moeenfarid , [Entropy generation analysis of squeeze film air damping in torsional micromirrors](#) , Optik , Volume ( 126 ) , 2015-1, Pages 28-37
  22. Reza Moloudi , Javad Abolfazli Esfahani , [Modeling of gas release following pipeline rupture: Proposing nondimensional correlation](#) , Journal of Loss Prevention in the Process Industries , Volume ( 32 ) , 2014-11, Pages 207-217
  23. Seyed Mahmood Mousavi , Javad Abolfazli Esfahani , [Numerical Investigation of Replaced equations for Irreversible Otto Cycle Using Pareto-Based Multi-Objective Genetic Algorithm](#) , Journal of Mechanical Engineering , Volume ( 124 ) , 2014-11, Pages 189-197
  24. sayyed aboozar fanaee , Javad Abolfazli Esfahani , [The analytical modeling of propane-oxygen mixture at catalytic micro-channel](#) , Heat and Mass Transfer , Volume ( 50 ) , 2014-10, Pages 1365-1373
  25. ehsan yazdan panah moghadam , Ehsan Roohi , Javad Abolfazli Esfahani , [Heat Transfer and Fluid Characteristics of Rarefied flow in Thermal Cavities](#) , Vacuum , Volume ( 109 ) , 2014-9, Pages 333-340
  26. Seyed Mahmood Mousavi , Javad Abolfazli Esfahani , [Numerical investigation of the flameless oxidation of natural gas in the IFRF furnace using large eddy simulation](#) , International Journal of Spray and Combustion Dynamics , Volume ( 6 ) , 2014-8, Pages 387-410

27. Javad Abolfazli Esfahani , behrouz jam , mohammadmojtaba noori , Amirreza Mahmoodi , [Numerical and parametric study of a centrifugal pump](#) , International Journal of Fluid Mechanics & Machinery , Volume ( 1 ) , 2014-6, Pages 36-40
28. Javad Alinejad , Javad Abolfazli Esfahani , [Lattice-Boltzmann simulation of forced convection over an electronic board with multiple obstacles](#) , Heat Transfer Research , Volume ( 45 ) , 2014-4, Pages 241-262
29. sayyed aboozar fanaee , Javad Abolfazli Esfahani , [Two-dimensional analytical model of flame characteristic in catalytic micro-combustors for a hydrogeneair mixture](#) , International Journal of Hydrogen Energy , Volume ( 39 ) , 2014-1, Pages 4600-4610
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31. Javad Abolfazli Esfahani , Ali Norouzi , [Two relaxation time lattice Boltzmann model for rarefied gas flows](#) , Physica A: Statistical Mechanics and its Applications , Volume ( 393 ) , 2014-1, Pages 51-61
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33. Javad Abolfazli Esfahani , hamid reza karbasian , Aref F. Kangarshahi , Ebrahim Barati , [Protection of Bend from Erosion Caused by Gas- Particle Flows in Town Border Station](#) , CFD Letters , Volume ( 5 ) , 2013-12, Pages 185-192
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35. Javad Abolfazli Esfahani , Javad Alinejad , [Lattice Boltzmann simulation of viscous-fluid flow and conjugate heat transfer in a rectangular cavity with a heated moving wall](#) , Thermophysics and Aeromechanics , Volume ( 20 ) , 2013-12, Pages 613-620
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37. reza parizadlaein , Javad Abolfazli Esfahani , [Experimental Study of Flow Developing in Adverse Pressure Gradient Condition of Open Circuit Suction-Type Wind Tunnel by Particle Image Velocimetry](#) , Philippine Scientist , Volume ( 49 ) , 2013-12, Pages 38-44



38. Javad Alinejad , Javad Abolfazli Esfahani , [Lattice-Boltzmann simulation of forced convection over an electronic board with multiple obstacles](#) , Heat Transfer Research , Volume ( 44 ) , 2013-10, Pages 1-10
39. Omid Ejtehad , Ehsan Roohi , Javad Abolfazli Esfahani , [Detailed investigation of hydrodynamics and thermal behavior of nano/micro shear driven flow using DSMC](#) , Scientia Iranica , Volume ( 20 ) , 2013-8, Pages 1228-1240
40. Javad Abolfazli Esfahani , E. Barati , hamid reza karbasian , [Effect of caudal on hydrodynamic performance of flapping foil in fish-like swimming](#) , Applied Ocean Research , Volume ( 42 ) , 2013-8, Pages 32-42
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42. Javad Abolfazli Esfahani , Seyed Mahmood Mousavi , Masoud Yazdi Mamaghani , [Alternative Equations to Compute the Network and the Thermal Efficiency of the Irreversible Diesel Cycle Using Genetic Algorithm](#) , American Journal of Mechanical Engineering , Volume ( 1 ) , 2013-7, Pages 119-125
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44. Javad Abolfazli Esfahani , Ahmad Reza Vassel Be Hagh , [A numerical study on shear layer behaviour in flow over a square unit of four cylinders at Reynolds number of 200 using the LB method](#) , Progress in Computational Fluid Dynamics , Volume ( 13 ) , 2013-4, Pages 103-119
45. Javad Abolfazli Esfahani , Omid Ejtehad , Ehsan Roohi , [Second Law Analysis of Micro/Nano-Couette Flow Using Direct Simulation Monte Carlo Method](#) , International Journal of Exergy-IJEX , Volume ( 13 ) , 2013-3, Pages 320-342
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52. Javad Abolfazli Esfahani , behtash bagherian , [Similarity Solution for Unsteady Free Convection From a Vertical Plate at Constant Temperature to Power Law Fluids](#) , Journal of Heat Transfer , Volume ( 134 ) , 2012-10, Pages 1-7
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56. Javad Abolfazli Esfahani , Seama Kouhi Fayegh Dehkordi , [Laminar Film Condensation on a Nanosphere](#) , Journal of Nanotechnology in Engineering and Medicine , Volume ( 3 ) , 2012-2, Pages 1-10
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59. Mohammad Mohammadiun , Javad Abolfazli Esfahani , omid mahian , Hamid Mohammadiun , [A Numerical Solution to Modify the Inverse Heat Conduction Problem with Noisy Data during the Heating a Solid Bar](#) , European Journal of Scientific Research , Volume ( 57 ) , 2011-9, Pages 391-400

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65. Javad Abolfazli Esfahani , , [Effect of Non-uniform Heating on Entropy Generation for Laminar Developing Pipe Flow of a high Prandtl number fluid](#) , Energy Conversion and Management , Volume ( 51 ) , 2010-11, Pages 2087-2097
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74. Garahi , Javad Abolfazli Esfahani , [EFFECT OF CHAR LAYER ON TRANSIENT THERMAL OXIDATIVE DEGRADATION OF POLYETHYLENE](#) , Research Journal of Biological Sciences , 2007-10
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77. Mohammad Hadi Farahi , Javad Abolfazli Esfahani , [On an optimal shape design problem to control a thermoelastic deformation under a prescribed thermal treatment](#) , Applied Mathematical Modelling , 2007-2
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80. Mohammad Bagher Ayani , Javad Abolfazli Esfahani , sousa , [The effect of radiation on the laminar natural convection induced by a line heat source](#) , International Journal of Numerical Methods for Heat & Fluid Flow , 2006-1
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- [Source A Numerical Study with Primitive Variables](#) , Scientia Iranica , 2005-4
84. Javad Abolfazli Esfahani , [Entropy Generation Analysis of a Flat Plate Boundary Layer with Various Solution Methods](#) , Archivos de zootecnia , 2005-3
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#### Supervisor of MS Thesis, 45 titles (some title in Persian)

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13	انتقال حرارت جابجایی آزاد در مطالعه ی عددی استفاده محفظه های متخلخل مربعی اشباع شده از سیال با از مدل برینکمان- فرکهایمر همراه با بررسی آثار هیدرومغناطیسی	M.Sc.	vahid bordbar	2011-06-19
14	بکارگیری روش شبکه ی بولتزمن در شبیه سازی جریان سیال حول سازه های جامد متشکل از دو استوانه ی دایروی	M.Sc.	Ahmad Reza Vasel Be Hagh	2011-05-20
15	تجزیه و تحلیل فرایند چگالش بر روی لوله بیضوی همراه با بررسی جدایش لایه چگالیده از روی سطح لوله	M.Sc.	Seyedeh Mahnaz Modir Khazeni	2011-10-22
16	سارت و واکنش شیمیایی در بررسی اثرات دافور و جریان ترکیبی هیدرودینامیک-مغناطیس برای صفحه عمودی در محیط متخلخل با جابه جایی و مکش	M.Sc.	Sadeq Zafariyan	2011-09-22
17	تولید انرژی در جریان رقیق رانده شده تجزیه و تحلیل میکرو/نانو با استفاده از روش بوسیله تنش برشی در ابعاد شبیه سازی مستقیم مونت کارلو	M.Sc.	Omid Ejtehad	2012-09-17
18	بررسی آلاینده های خروجی احتراق بدون شعله با استفاده از نرم افزار اینفوم	M.Sc.	seyed mahmood mousavi	2013-02-03

19	بررسی عددی تأثیر مدل‌های اتمیزه شدن سوخت بر تبخیر قطرات	M.Sc.	Mostafa Pourali	2013-02-02
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23	بررسی فرایند خشک کردن اجسام دوبعدی مرطوب به شیوه ی همرفت	M.Sc.	hosein majdi	2013-09-23
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امین ضیافروغی مدل سازی اسپری انژکتور سوخت مایع ۱۳۸۸

سینا کوهی فایق دهکردی تحلیل انتروپی میعان در جریان خارجی با در نظر گرفتن اثر تنش برشی در حد فاصل فازهای بخار و مایع ۱۳۸۷

پریسا وضعی حل جریان سیال و انتقال حرارت و تحلیل تولید انتروپی در محفظه های حاوی نانو سیال ۱۳۸۷

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