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## 孙亚松

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### 基本信息 The basic information

姓名: 孙亚松

学院: 动力与能源学院

学历: 博士研究生毕业

工学博士

职称: 副教授

职务:

学科: 工作经历 Work Experience

动力工程及工程热物理-工程热物理, 动力工程及工程热物理-热能工程,  
航空宇航科学-航空宇航推进理论与工程

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力与能源学院, 副教授, 硕士生导师

2018.03, Oxford University, Trinity college

2014.11-2015.11, Rutgers, The State University of New Jersey, Department of Mechanical and Aerospace Engineering

2014.01-2016.11, 华北电力大学, 能源动力与机械工程学院

2012.05-2012.06, The University of Nottingham, Department of Fluids and Thermal Engineering

2011.07-2013.12, 华北电力大学, 可再生能源学院

### 教育教学 Education And Teaching

#### 主讲课程

[1] 本科生专业基础课《两相流与传热》

[2] 研究生专业基础课《Matlab数值传热学》

#### 教学会议

[1] 孙亚松. 陕西省智慧教学研修班一期. 中国学堂在线. 陕西省宝鸡市, 2018.07.23-2018.07.25. 特邀报告.

[2] 孙亚松. 教育信息化2.0背景下的混合式教学设计与实践. 西北地区高等学校教师教学发展中心联盟. 陕西省西安市, 西京学院, 2018.08.30-2018.08.31.

[3] 孙亚松. 教学研讨会暨2018雨课堂峰会. 教育部在线教育研究中心. 北京, 清华大学, 2018.09.08-2018.09.09.

#### 中文教材

[1] 孙亚松. 太阳能热发电、地热能发电(第4和第6章). 可再生能源概论, 中国环境出版社, 2013. (个人撰写5.5万字以上, 省部级规划教材)

### 招生信息 Admission Information

热烈欢迎工程热物理、热能工程、动力工程、航空宇航推进理论与工程等学科方向的硕士研究生报考。

### 荣誉获奖 Awards Information

Oxford English Medium Instruction Certificate

教育部霍英东教育基金获得者：  
 国家留学基金委全额资助公派留学计划；  
 华北电力大学青年骨干教师；  
 辽宁省优秀毕业生；  
 东北大学优秀博士论文；  
 东北大学“十佳学术之星”；  
 东北大学优秀博士论文培育计划和连续资助计划；  
 东北大学“罕王特钢”特等奖学金，全校10名；  
 东北大学材料与冶金学院院长奖章，全院1名。

## 科学研究 Scientific Research

### 研究方向：

高温热辐射、非灰气体辐射特性、两相流传热和新能源利用

### 科研项目：

主持国家自然科学基金、霍英东基金项目——高校青年教师基金、陕西省重点研发计划(一般项目)、教育部博士点基金、国家博士后基金面上项目等纵向项；

参与美国自然科学基金、国家自然科学基金重点项目、国家自然科学基金重大国际（地区）合作项目、国家973项目等纵向项目多项。

## 学术成果 Academic Achievements

已发表论文33篇，参编教材1部。其中，ESI高被引论文3篇，前沿研究领域论文3篇，SCI论文22篇（JCR1区论文15篇，第1作者或通讯作者论文20篇）；和60.57；研究成果被本领域国际知名专家正面引用580余次(谷歌学术)，H因子15，其中SCI他引410余次。

### 10篇代表性英文论文

- [1] Ma J, Sun YS, Li BW. Spectral collocation method for transient thermal analysis of coupled conductive, convective and radiative heat transfer in the moving plate temperature dependent properties and heat generation, International Journal of Heat and Mass Transfer, 2017, 114: 469-482.
- [2] Ma J, Sun YS, Li BW. Simulation of combined conductive, convective and radiative heat transfer in moving irregular porous fins by spectral element method. Inte Journal of Thermal Sciences, 2017, 118: 475-487.
- [3] Ma J, Sun YS, Li BW, Chen H. Spectral collocation method for radiative-conductive porous fin with temperature dependent properties. Energy Conversion and M, 2016, 111, 279-288.
- [4] Sun YS, Ma J, Li BW, Guo ZX. Predication of nonlinear heat transfer in a convective-radiative fin with temperature dependent properties by the collocation spectr, Numerical Heat Transfer Part B, 2016, 69(1): 68-83.
- [5] Sun YS, Ma J, Li BW. Chebyshev collocation spectral method for three-dimensional transient coupled radiative-conductive heat transfer. ASME Journal of Heat T, 2012, 134(9): 092701.
- [6] Sun YS, Li BW. Prediction of radiative heat transfer in 2D irregular geometries using the spectral collocation method based on body-fitted coordinate. Journal of Q Spectroscopy and Radiative Transfer, 2012, 113(17): 2205-2212.
- [7] Sun YS, Li BW. Chebyshev collocation spectral approach for combined radiation and conduction heat transfer in one dimensional semitransparent medium with gr, International Journal of Heat and Mass Transfer, 2010, 53(7-8): 1491-1497.
- [8] Sun YS, Li BW. Spectral collocation method for transient conduction-radiation heat transfer. Journal of Thermophysics and Heat Transfer, 2010, 24(4): 823-832.
- [9] Sun YS, Li BW. Spectral collocation method for transient combined radiation and conduction in an anisotropic scattering slab with graded index. ASME Journal of Transfer, 2010, 132(5): 052701.
- [10] Sun YS, Li BW. Chebyshev collocation spectral method for one-dimensional radiative heat transfer in graded index. International Journal of Thermal Sciences, 2009, 48: 691-698.

### 代表性中文期刊论文

- [1] 马菁, 孙亚松. 基于离散坐标的谱配置法对太阳能辐射传输特性的研究. 中国科技论文, 2016, 11(11): 1240-1244.
- [2] 马菁, 孙亚松. 多孔翅片散热器内辐射/对流/导热的耦合传热. 中国科技论文, 2016, 11(5): 520-523.
- [3] 孙亚松, 马菁. 对流和辐射条件下变热特性参数的肋片传热性能. 中国科技论文, 2015, 10(16): 1884-1889.
- [4] 孙亚松, 马菁, 李本文. 谱配置法研究导热系数为温度函数的对流-辐射肋片的效率. 中国科技论文, 2014, 9(8): 878-882.
- [5] 孙亚松, 李本文. 改进的配置点谱方法求解平行平板间辐射换热. 东北大学学报(自然科学版), 2010, 31(7): 977-981.
- [6] 孙亚松, 李本文. 全谱方法求解平行平板间非线性各向异性散射介质内辐射换热, 中国科技论文, 2013, 8(6): 727-731. (封面论文)
- [7] 马菁, 孙亚松, 李本文. 谱方法求解三维辐射与导热耦合换热问题, 化工学报, 62(7), 2011, 1838-1845.

### 国际会议论文

- [1] Sun YS. Spectral Collocation Method for Non-Fourier Conduction and Radiation in a Cylindrical Medium. The 2nd International Conference on New Energy and I Energy System, NEFES2017, September 22nd-25th, 2017, Kunming, Yunnan, China. (Invited Paper)
- [2] Ma J, Sun YS, Ji XB. Nonlinear heat transfer in the moving porous fin of irregular profile with temperature dependent properties and heat generation. 11th Conference on Sustainable Development of Energy, Water and Environment Systems, SDEWES2016, September 4-9, 2016, Lisbon, Portugal. (Invited Paper)
- [3] Sun YS, Guo ZX. Spectral collocation discrete ordinate method for solar radiative transfer. First Thermal and Fluids Engineering Summer Conference, TFESC15, 2015, New York, USA. (Invited Paper)

[4]Ma J, Sun YS, Li BW. Convective-radiative fin of irregular profile with multiple nonlinearities by the collocation spectral method. TFESC15, August 09-12, 2015 USA.(Oral Presentation)

[5]Sun YS, Ma J, Li BW, Guo ZX. Thermal analysis of a convective-radiative fin with temperature-dependent properties by the collocation spectral method. Advance Computational Heat Transfer, CHT15, May 25-29, 2015, Rutgers University, Piscataway, USA. (Oral Presentation)

[6]Ma J, Sun YS, Li BW. Parametric study of simultaneous radiative transfer in plane-parallel scattering medium with variable refractive index by spectral collocation ASME 2013 Summer Heat Transfer Conference, July 14-19, 2013, Minneapolis, USA.(Oral Presentation)

[7]Sun YS, Li BW. Prediction of radiative heat transfer in 2D and 3D irregular geometries using the collocation spectral method based on body-fitted coordinates. Ad Computational Heat Transfer, CHT 12, July 1-6, 2012, Bath: England. (Poster)

[8] Li BW, Sun YS, Tian S, Ma J, Hu ZM. Our recent works on the collocation spectral method for thermal radiation in participating media. Advances in Computational Transfer, CHT 12, July 1-6, 2012, Bath, England. (Poster)

[9]Sun YS, Li BW. A direct spectral collocation method for radiative heat transfer inside a plane-parallel participating medium with a graded index. 6th International Conference on Radiative Transfer, June 13-19, 2010, Antalya: Turkey. (Oral Presentation)

## 社会兼职 Social Appointments

1、葡萄牙里斯本举办的SDEWES2016、中国昆明举办的NEFES2017、美国拉斯维加斯举办的TFEC19等国际会议的分会主席；

2、美国机械工程师协会（ASME）会员，美国热流体工程协会（ASTFE）会员，中国航空学会会员；

3、Energy Conversion and Management、International Journal of Heat and Mass Transfer、International Journal of Thermal Sciences期刊的杰出审稿人（Outstanding Reviewer）

4、国家自然科学基金函评专家；

5、*Energy, Applied Energy, Energy Conversion and Management, International Journal of Heat and Mass Transfer, International Journal of Thermal Sciences, Applied Engineering, International Journal of Mechanical Sciences, International Journal of Hydrogen Energy, ASME Journal of Heat Transfer, Heat Transfer Research, Chemical & Process Engineering, PLOS One, Numerical Heat Transfer Part A, Numerical Heat Transfer Part B, Optics Express, Applied Optics, Optics Express, Communications in Nonlinear Sciences, Numerical Simulation, Journal of Porous Media, AIAA Journal of Thermophysics and Heat Transfer, Journal of Enhanced Heat Transfer, Experimental Thermal and Fluid Science, Journal of Computational and Applied Mathematics* 等20余种国际期刊审稿人。

6、第16届国际传热大会(16th International Heat Transfer Conference)审稿人

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