

邝东阳

Curriculum Vitae

Live in the moment. Learn from the past. Dream for the future.

基本情况

出生年月: 1989 年 5 月 29 日

个人网站: <https://dykuang.github.io>

电子邮箱: dykuang@outlook.com

Github: <https://github.com/dykuang>

LinkedIn: <https://www.linkedin.com/in/dykuang>



工作经历

博士后

2019.08-present

Oden Institute for Computational Engineering & Sciences

University of Texas at Austin

- 高能物理数据库和数据平台的建立, 数据分析, 机器学习深度学习模型及工具的开发

博士后

2017.09-2019.07

Data Science and Machine Learning Group

University of Ottawa

- 本科生教学, 硕士生辅导
- 深度学习工具在医疗图像和非线性动态系统中的应用
- Affiliation Award with Vector Institute Toronto for Artificial Intelligence. (未领取)

访问助理教授

2016.08-2017.06

Dept. of mathematics

Southern Utah University

- 本科生教学, 系内课题研究

教育背景

博士(数学)

GPA: 3.956/4.00

2012.01-2016.08

University of Wyoming, Laramie, Wyoming

- 毕业论文: A Particle Method for Euler-Poincare Equation and Its Applications in Analysis of Landmark Based Image Templates.
- 导师: Prof. Long Lee. Dept. of Mathematics. University of Wyoming.

- 毕业论文: Numerical Integration of Two Variables Based on Small Amounts of Sample Points.
- 导师: Prof. 邓建松. 中国科学技术大学, 安徽合肥

会议论文

- **Data-enabled Fusion Technology (DeFT): Machine Learning Tools in the Ousai Platform**
Craig Michoski, David Hatch, Todd Oliver, Dongyang Kuang, Steph-Y Louis, Siwei Luo, Matthieu Vitse
2021/11/11 (to appear)
Bulletin of the American Physical Society, American Physical Society
 - **Cycle-consistent training for Reducing Negative Jacobian Determinant in Deep Registration Networks.**
Dongyang Kuang
Simulation and Synthesis in Medical Imaging (SASHIMI) 2019
LNCS, vol 11827, pp. 1-10, 2019.
In conjunction with MICCAI 2019, October 13, 2019, Shenzhen, China
https://doi.org/10.1007/978-3-030-32778-1_13
 - **FAIM - A ConvNet Method for Unsupervised 3D Medical Image Registration.**
Dongyang Kuang and Tanya Schmäh
Machine Learning in Medical Imaging (MLMI) 2019.
LNCS vol 11861, pp. 1-9, 2019.
In conjunction with MICCAI 2019, October 13, 2019, Shenzhen, China
https://doi.org/10.1007/978-3-030-32692-0_74
-

杂志论文

- **Dual stream neural networks for brain signal classification**
Dongyang Kuang and Craig Michoski
Journal of Neural Engineering.
Volume 18. No.1. 2021.
- **Kinetics and mechanism of CO₂ gasification of coal catalyzed by Na₂CO₃, F eCO₃ and Na₂CO₃ - F eCO₃**
*Bang Xu, Qingxi Cao, Dongyang Kuang, Khaled.A.M.Gasem, Hertanto Adidharma, Dong Ding and Maohong, Fan**
Journal of the Energy Institute.
Volume 93, Issue 3, pp 922-933, 2020
- **Landmark-based algorithms for group average and pattern recognition.**
*Snehalata Huzurbazar, Dongyang Kuang and Long Lee**
Pattern Recognition
Volume 86, pp 172-187. 2019
- **Some optional methods of activation energy determination on pyrolysis**
*Bang Xu and Dongyang Kuang**
Kinetics and Catalysis.
Volume 60. No. 2. 137-146. 2019.

- **Predicting kinetic triplets using a 1d convolutional neural network.**
*Dongyang Kuang and Bang Xu**
 Thermochemica Acta
 Volume 669, pp 8-15. 2018

- **A geodesic landmark shooting algorithm for template matching and its applications.**
Roberto Camassa, Dongyang Kuang and Long Lee*
 SIAM Journal on Imaging Sciences.
 Volume 10, Issue 1, pp 303-334. 2017

- **Characterization of Powder River Basin coal pyrolysis with cost-effective and environmentally friendly composite Na-Fe catalysts in a thermogravimetric analyzer and a fixed-bed reactor**
*Bang Xu, Dongyang Kuang, Fangjing Liu, Wenyang Lu, Alexander K.Goroncyc, Ting He, Khaled Gasem and Maohong Fan**
 International Journal of Hydrogen Energy.
 Volume 43, Issue 14, pp 6918-6935. 2018

- **Solitary waves and N-particle algorithms for a class of Euler-Poincaré equations.** (*Highlights of the Year 2016*)
Roberto Camassa, Dongyang Kuang and Long Lee*
 Studies in Applied Mathematics.
 Volume 137, Issue 4. pp 502-546. 2016

- **A conservative formulation and a numerical algorithm for the doublegyre nonlinear shallow-water model.**
*Dongyang Kuang and Long Lee**
 Numerical Mathematics: Theory, Methods and Applications.
 Volume 8. Issue. 4. pp 634-650. 2015.

在投论文

- **A 1d convolutional network for leaf and time series classification.**
 - **SEER-Net: a simple EEG-based emotional recognition network.**
 - **MGKDB: A MongoDB for Gyrokinetic Electromagnetic Numerical Experiment**
 - **A method from system identification on System Architectures for Integrated Analysis (SAFIA)**
-

学术项目

- 开发针对网络课程中学生注意力变化的实时分析工具 2020.11 –
Oden Institute, University of Texas at Austin, USA
负责人: Craig Michoski
- 开发针对等离子体线性实验 (PLX) 的数据分析工具 2019.11 –
Oden Institute, University of Texas at Austin, USA
负责人: Craig Michoski
- 基于 EEG 信号的人机识别任务 2019.10 –
Oden Institute, University of Texas at Austin, USA
负责人: Craig Michoski
- 数据库的开发, 数据平台的搭建及机器学习, 深度学习工具在其中的应用 2019.08 –
Oden Institute, University of Texas at Austin, USA
负责人: David Hatch, Craig Michoski
- 深度学习在医疗图像和非线性动态系统的应用 2017.09 – 2019.05
Data Science and Machine Learning Group, University of Ottawa, Canada
负责人: Tanya Schmäh, Cristina Stoica
- 便携式设备中基于 Raman 波谱的物质检测 2018.05 – 2018.06
NRC-Ottawa Industrial Problem Solving Workshop, National Research Council, Ottawa, Canada
- 基于转动惯量方法的卫星姿势控制的可视化 2017.10 – 2017.11
Dept. of mathematics and Statics. University of Ottawa, Canada
负责人: Tanya Schmäh, Cristina Stoica
- 深度学习方法在生物质热重实验中的应用及新方法的开发 2017.07 –
(和朋友一起的个人兴趣项目)
负责人: Bang Xu
- 多个模式识别课程项目 2015.09 – 2015.12
Dept. of Electrical Engineering. University of Wyoming. USA
负责人: Cammeron Wright
- 简明 Bootstrap Sampling (课程项目) 2015.01 – 2015.04
Dept. of Statistics. University of Wyoming. USA
负责人: Blair Robertson
- Ito 随机方程模型解的模拟 (课程项目) 2014.09 – 2014.12
Dept. of Mathematics. University of Wyoming. USA
负责人: Hakima Bessaih
- Parabolic PDE 解法包 (课程项目) 2014.09 – 2014.12
Dept. of Mathematics. University of Wyoming. USA
负责人: Craig. C. Douglas
- 关于校学生历史录取数据的分析和招募建议 (课程项目) 2014.01 – 2014.05
Dept. of Mathematics. University of Wyoming. USA
负责人: Craig. C. Douglas
- NURBS 时间序列模型与数据重建 (大研计划) 2010.06 – 2010.09
计算机学院, 中国科学技术大学

负责人：邵晨曦

- 手机用户的行为分析（课程项目）

2010.02 – 2010.06

数学与统计学院，中国科学技术大学

负责人：杨周旺

学术讲演

- **FAIM - A ConvNet Method for Unsupervised 3D Medical Image Registration(Poster)**
10th International Workshop on Machine Learning in Medical Imaging
In conjunction with MICCAI. 2019.10
Shenzhen, China
- **Cycle-consistent training for Reducing Negative Jacobian Determinant in Deep Registration Networks. (Poster)**
4th International Workshop on Simulation and Synthesis in Medical Imaging
In conjunction with MICCAI. 2019.10
Shenzhen, China
- **Convnets, a different view of approximating diffeomorphisms in medical image registration.** 2018.12
Shape Analysis, Stochastic Geometric Mechanics and Applied Optimal Transport Workshop,
Banff International Research Station, Banff, Alberta, Canada
- **Improve Effectiveness of Spectral Matching in Portable Raman Spectrometers.** 2018.05
NRC-Ottawa Industrial Problem Solving Workshop, NRC, Ottawa, Canada
- **Medical image registration with neural networks.** 2018.04
Statistical Learning Workshop, Univ. of Ottawa, Ottawa, Canada
- **2B or not 2B? It is a mathematical question.** 2017.02
Chatham University, Pittsburgh, PA, USA
- **A Bayesian method on landmark momentum data for abnormality detection.** 2016.06
RMMC-Functional Analytic and Statistical Methods in Error Prediction with Applications. Univ. of Wyoming, USA
2016.10
Southern Utah University, Cedar City, Utah, USA
- **Shape analysis based on landmark representation.** 2015.05
Applied and Computational Mathematics Seminars, Univ. of Wyoming, Laramie, USA
- **The N-particle system for EPDiff and its applications in shape analysis.** 2015.03
Graduate Students Seminars, Univ. of Wyoming, Laramie, USA

参与会议

- 22nd International Conference on Medical Image Computing and computer assisted Intervention (MICCAI 2019). 2019.10
Shenzhen, China
- Shape Analysis, Stochastic Geometric Mechanics and Applied Optimal Transport. 2018.12
Banff International Research Station, Alberta, Canada

- 32nd Conference on Neural Information Processing Systems (NeurIPS) 2018.12
Montreal, Quebec, Canada
- NRC-Ottawa Industrial Problem Solving Workshop. 2018.05
Fields Institute - Canada National Research Council - University of Ottawa, Canada
- Geometric PDEs and Their Approximation. 2016.01
Texas A&M Univ., College Station, Texas, US.
- Rocky Mountain Mathematics Consortium (RMMC)
- Functional Analytic and Statistical Methods in Error Prediction with Applications. 2016.06
Univ. of Wyoming, Laramie, Wyoming, US.
- Rocky Mountain Mathematics Consortium (RMMC)
- Stochastic Differential Equations. 2014.06
Univ. of Wyoming, Laramie, Wyoming, US.

荣誉奖项

Affiliation Award with Vector Institute for Artificial Intelligence. ⁱ	2019. 03
Travel award for winter school in Texas A&M University	2015. 11
Graduate assistantship, Univ. of Wyoming	2012–2016
国家励志奖学金（一等）	2009–2011
大学生研究计划一等奖	2010
唐仲英奖学金	2010
中国科学技术大学优秀学生奖学金	2008–2011

社会经历

志愿者 The data Effect conference in Ottawa, CA	2018. 05
中国留学生和学者协会（CSSA）志愿者	2016. 02
校羽毛球俱乐部 officer	2015–2016

技能与爱好

编程语言：

- 熟练：Python, Matlab
- 有经验：C, C++, R, Mathematica, SQL, MongoDB, Shell, Julia

外语：

英语（八年北美经历，雅思 8.0）

学术兴趣：

人工智能，深度学习，机器学习，数据分析，数学建模，科学计算，数据可视化

业余爱好:

旅行，羽毛球，乒乓球，网球

ⁱ 由于工作变动，未领取