

# 王曉明 WANG XIAOMING

博士 Ph.D.

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## 研究領域

生成式 AI; 智能機器人; 機器人書法; 圖像處理

## 學歷

2018.8-2024.8 博士學位, 電腦科學, 澳門大學

2014.8-2018.7 碩士學位, 機電工程, 澳門大學

2009.9-2013.7 學士學位, 機械設計製造及其自動化(創新實驗班), 山東理工大學

## 工作經歷

2024.10 至今 講師, 中山大學新華學院(廣州新華學院) 人工智能與數據科學系

2019.8-2024.8 書院 RT, 澳門大學 呂志和書院

2018.8-2024.8 助研 RA, 澳門大學 軟件工程實驗室 智慧城市物聯網國家重點實驗室

2018.9-2021.5 助教 TA, 澳門大學 科技學院 電腦及資訊科學系

2013.8-2014.7 技術助理, 淄博友川水務科技有限公司

## 學術發表

期刊:

**Xiaoming Wang**, Zhiguo Gong. RoDAL: Style Generation in Robot Calligraphy with Deep Adversarial Learning. Applied Intelligence, 2024. (JCR Q2)

**Xiaoming Wang**, Yilong Yang, Zhiguo Gong, etc. Generative adversarial networks-based motion learning towards robotic calligraphy synthesis. CAAI Transactions on Intelligence Technology, 2023. (JCR Q1)

Ruidong Xi, Xue Zhang, Tienan Ma, **Xiaoming Wang**, Xiao Xiao, Max Q.-H. Meng. Disturbance Observer based Terminal Sliding Mode Control for an Electromagnetic Actuated Micropositioner with Prescribed Performance. IEEE Robotics and Automation Letters, 2024. (JCR Q2)

Qingtian Wu, **Xiaoming Wang**, Lei Dai, Liming Zhang, Fei Richard Yu. A Real-Time Multi-Task Learning System for Joint Detection of Face, Facial Landmark and Head Pose. IEEE Internet of Things Journal. preprint. (SCI Q1)

Qingtian Wu, **Xiaoming Wang**, Hanzi Wang, Jiajian Zhang, Liming Zhang. YOLOLandmark: an End-to-End Deep Network for Real-time Face and Its Dense Facial Landmark Detection. IEEE Transactions on Industrial Informatics. preprint. (SCI Q1)

Xiao Xiao, Yangmin Li, **Xiaoming Wang**. Configuration Analysis and Design of a Multidimensional Tele-operator Based on a 3-P(4S) Parallel Mechanism. Springer Journal of Intelligent & Robotic Systems, 2018. (JCR Q3)

Jinliang Gong, **Xiaoming Wang**, Fengnan Huang, Yanfei Zhang. Dynamic performances analysis of hybrid press based on dependent generalized coordinates. Journal of Mechanical

Engineering Science, 2015. (JCR Q3)

著作：

《Data for Intelligent Operation and Maintenance of Bridge-island-tunnel Crossings-Common Structural Element Information》，Guangdong-Hong Kong-Macao Greater Bay Area Standards Promotion Council of Guangdong Province, 2023. (Co-author)

專利：

- \* 《一種基於生成對抗網絡的機器人書法創作及優化方法》2024 (審批中).
- \* 《一種面向橋樑病害知識圖譜建模及圖神經網絡的預測方法》2024 (審批中).

## 科研項目

- \* 2023.1-2024.12 类别不平衡节点分类的数据增强，澳門大學科研基金，參與人，進行中。  
(編號: MYRG-GRG2023-00186-FST-UMDF)
- \* 2019.12-2023.11 港珠澳大橋智能化運維技術集成應用-橋島隧多模態数据協同互聯及知識化關鍵技術，國家重點研發計劃項目，參與人，結題。(編號: 2019YFB1600704)
- \* 2017.1-2019.12 從需求描述到代碼生成的基於模型驅動的軟件開發，澳門大學科研基金，參與人，結題。(編號: MYRG 2017-00141-FST)

## 專業活動

- \* 2021 年至今 IEEE 會員，IEEE 機器人自動化學會會員
- \* 2021 年至今 IEEE 青年學者項目成員
- \* 2024.3-2027.3 International Journal of Intelligent Information Systems 期刊編輯
- \* IEEE Transactions on Circuits and Systems for Video Technology, IEEE/ASME Transactions on Mechatronics, CAAI Transactions on Intelligence Technology, Frontiers in Neuroscience 等期刊審稿人

## 專業實踐

- \* 2022 基於 AI 的書法圖像處理及生成
- \* 2021 機器人寫書法人機交互開放日表演
- \* 2021 “靈飛體”書法字形設計、書法字體綜合系統
- \* 2019 移動小車設計及 3D 建模渲染作品

## 榮譽獎勵

- \* 2018-2024 博士生 RA/TA 獎學金
- \* 2014-2018 碩士生 RA 獎學金
- \* 大學生 3D 數字化創新設計大賽國二等獎、省特等獎；挑戰杯課外學術作品競賽校特等獎；大學生機電產品創新設計競賽省三等獎；奧數競賽省級二等獎等

個人主頁: <https://xiaoming622.github.io>

# XIAOMING WANG

## Ph.D.

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Guangzhou City; No.248, Yanjiang West Road,  
Machong Town, Dongguan, Guangdong Province



## Research Area

AIGC; Intelligent robotics; Robot calligraphy; Image processing

## Education

2018.8-2024.8 PhD degree, Computer Science, University of Macau  
2014.8-2018.7 M.S. degree, Electromechanical Engineering, University of Macau  
2009.9-2013.7 B.S. degree, Mechanical Engineering, Shandong University of Technology

## Working Experience

2024.10-present Lecturer, Department of Artificial Intelligence and Data Science, Xinhua College,  
Sun Yat-sen University (Guangzhou Xinhua University)  
2019.8-2024.8 Resident Tutor, Lui Che Woo College, University of Macau  
2018.8-2024.8 Research Assistant, Software Engineering Lab, State Key Lab of Internet of Things  
for Smart City, University of Macau  
2018.9-2021.5 Teaching Assistant, Department of Computer and Information Science, UM  
2013.8-2014.7 Technical Assistant, Zibo Youchuan Water Treatment Technology Co., Ltd.

## Publications

**Xiaoming Wang**, Zhiguo Gong. RoDAL: Style Generation in Robot Calligraphy with Deep Adversarial Learning. Applied Intelligence, 2024. (JCR Q2)  
**Xiaoming Wang**, Yilong Yang, Zhiguo Gong, etc. Generative adversarial networks-based motion learning towards robotic calligraphy synthesis. CAAI Transactions on Intelligence Technology, 2023. (JCR Q1)  
Ruidong Xi, Xue Zhang, Tienan Ma, **Xiaoming Wang**, Xiao Xiao, Max Q.-H. Meng. Disturbance Observer based Terminal Sliding Mode Control for an Electromagnetic Actuated Micropositioner with Prescribed Performance. IEEE Robotics and Automation Letters, 2024. (JCR Q2)  
Qingtian Wu, **Xiaoming Wang**, Lei Dai, Liming Zhang, Fei Richard Yu. A Real-Time Multi-Task Learning System for Joint Detection of Face, Facial Landmark and Head Pose. IEEE Internet of Things Journal. preprint. (SCI Q1)  
Qingtian Wu, **Xiaoming Wang**, Hanzi Wang, Jiajian Zhang, Liming Zhang. YOLOLandmark: an End-to-End Deep Network for Real-time Face and Its Dense Facial Landmark Detection. IEEE Transactions on Industrial Informatics. preprint. (SCI Q1)  
Xiao Xiao, Yangmin Li, **Xiaoming Wang**. Configuration Analysis and Design of a Multidimensional Tele-operator Based on a 3-P(4S) Parallel Mechanism. Springer Journal of

Intelligent & Robotic Systems, 2018. (JCR Q3)

Jinliang Gong, **Xiaoming Wang**, Fengan Huang, Yanfei Zhang. Dynamic performances analysis of hybrid press based on dependent generalized coordinates. Journal of Mechanical Engineering Science, 2015. (JCR Q3)

《Data for Intelligent Operation and Maintenance of Bridge-island-tunnel Crossings-Common Structural Element Information》, Guangdong-Hong Kong-Macao Greater Bay Area Standards Promotion Council of Guangdong Province, 2023. (Co-author)

#### **Patents:**

- \* A method for bridge disease knowledge graph modeling and graph neural network prediction.
- \* A robot calligraphy creation and optimization method based on generative adversarial network.

#### **Projects**

- \* 2023.1-2024.12, Data Augmentation for Class-Imbalanced Node Classification. University of Macau MYRG Fund. Contributor. In process. (Grant no: MYRG-GRG2023-00186-FST-UMDF)
- \* 2019.12-2023.11, Integrated application of intelligent operation and maintenance technology for the Hong Kong-Zhuhai-Macao Bridge. National Key Research & Development Program of China. Main contributor. Completed. (Grant no: 2019YFB1600704)
- \* 2017.1-2019.12, Model-Driven Software Development from Requirement Description to Code Generation. MYRG Fund. Contributor. Completed. (Grant no: MYRG 2017-00141-FST)

#### **Academic activities**

- \* Membership- IEEE, IEEE Robotics and Automation Society, 2021-present.
- \* Membership- IEEE Young Professionals Program, 2021-present.
- \* Editorial Board Member- International Journal of Intelligent Information Systems, 2024-2027.
- \* Reviewer- IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Mechatronics, CAAI Transactions on Intelligence Technology, Frontiers in Neuroscience, etc.

#### **Professional practices**

- \* 2022 AI-based calligraphy image processing and generation
- \* 2021 Human-computer interaction and demonstration of robot writing calligraphy on open-day
- \* 2021 " Lingfei " calligraphy font design, calligraphy font synthesis software
- \* 2019 Mobile robot design, 3D modeling and rendering work

#### **Honors/Awards**

- \* 2018-2024, PhD RA/TA scholarship, University of Macau.
- \* 2014-2018, Master RA scholarship, University of Macau.
- \* Excellent prize of National 3D Innovation Design Competition, Excellent prize of the 12th "The Challenge Cup" Technology Competition, Provincial 2nd Prize in Mathematics Olympiad, etc.

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