Xiuheng Wang

dr.xiuheng.wang@gmail.com • +33 06 25 96 30 98 Address: Campus Aiguillettes, F-54000 Nancy, France. Place of birth: Anhui, China • Date of birth: 4th Sep. 1996 https://xiuheng-wang.github.io/

APPOINTMENTS

Postdoctoral research associate, Université de Lorraine (CRAN)

Oct. 2024 – present

Research assistant, Université Côte d'Azur

Jun. 2021 – Jun. 2024

EDUCATION

Université Côte D'Azur, Nice, France

■ Ph.D. in Electrical Engineering / Doctorat Sciences pour L'Ingenieur

Jun. 2021 – Jun. 2024

- · Thesis: Joint Modeling and Learning Approaches for Hyperspectral Imaging and Change Point Detection
- Supervisor: Professor Cédric Richard

Northwestern Polytechnical University, Xi'an, Shaanxi, China

• M.S. in Signal and Information Processing

Sep. 2018 – Mar. 2021

■ B.S. in Electronic and Information Engineering

Sep. 2014 – Jul. 2018

RESEARCH

Research areas: Signal Processing (SP) and Machine Learning (ML), in particular,

- Riemannian optimization
- Change point detection
- Hyperspectral imaging

SELECTED PUBLICATIONS

Full list: https://scholar.google.com/citations?user=xyfMMGIAAAAJ&hl=en

JOURNAL AND ML CONF. PAPERS

- X. Wang, R. A. Borsoi, C. Richard, "Non-Parametric Online Change Point Detection on Riemannian Manifolds", International Conference on Machine Learning (ICML), Vienna, Austria, July 2024.
- X. Wang, R. A. Borsoi, J. Chen, C. Richard, "Deep Hyperspectral and Multispectral Image Fusion with Inter-Image Variability", IEEE Transactions on Geoscience and Remote Sensing (T-GRS), 2023.
- X. Wang, J. Chen, C. Richard, "Tuning-Free Plug-and-Play Hyperspectral Image Deconvolution with Deep Priors", IEEE Transactions on Geoscience and Remote Sensing (T-GRS), 2023.
- J. Chen, M. Zhao, X. Wang, C. Richard, S. Rahardja, "Integration of Physics-Based and Data-Driven Models for Hyperspectral Image Unmixing", IEEE Signal Processing Magazine (SPM), 2023.
- X. Wang, J. Chen, Q. Wei, C. Richard, "Hyperspectral Image Super-Resolution via Deep Prior Regularization with Parameter Estimation", IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT), 2021.
- M. Zhao*, X. Wang* (equivalent contribution), J. Chen, W. Chen, "A Plug-and-Play Priors Framework for Hyperspectral Unmixing", IEEE Transactions on Geoscience and Remote Sensing (T-GRS), 2021.

SP CONF. PAPERS

- X. Wang, R. A. Borsoi, A. Breloy, C. Richard, "Riemannian Change Point Detection on Manifolds with Robust Centroid Estimation", European Signal Processing Conference (EUSIPCO), 2025, submitted.
- X. Wang, R. A. Borsoi, C. Richard, "Riemannian Diffusion Adaptation over Graphs with Application to Online Distributed PCA", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Seoul, Korea, Apr. 2024.
- X. Wang, R. A. Borsoi, C. Richard, A. Ferrari, "Distributed Change Point Detection in Streaming Manifold-valued Signals over Graphs", Asilomar Conference on Signals, Systems and Computers (ACSSC), Pacific Grove (CA), USA, Oct. 2023.
- X. Wang, R. A. Borsoi, C. Richard, "Online Change Point Detection on Riemannian Manifolds with Karcher Mean Estimates", European Signal Processing Conference (EUSIPCO), Helsinki, Finnland, Sep. 2023.
- X. Wang, R. A. Borsoi, C. Richard, J. Chen, "Change Point Detection with Neural Online Density-Ratio Estimator", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Rhodes Island, Greece, June 2023.

- X. Wang, R. A. Borsoi, C. Richard, J. Chen, "Deep Image Fusion Accounting for Inter-Image Variability", Asilomar Conference on Signals, Systems and Computers (ACSSC), Pacific Grove (CA), USA, Nov. 2022.
- X. Wang, J. Chen, C. Richard, "Hyperspectral Image Super-Resolution with Deep Priors and Degradation Model Inversion", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Singapore, May 2022.
- X. Wang, M. Zhao, J. Chen, "Hyperspectral Unmixing via Plug-and-Play Prior", IEEE International Conference on Image Processing (ICIP), Abu Dhabi, United Arab Emirates, Oct. 2020.
- X. Wang, J. Chen, C. Richard, D. Brie, "Learning Spectral-Spatial Prior via 3DDNCNN for Hyperspectral Image Deconvolution", IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Barcelona, Spain, May 2020.

SCHOLARSHIPS & AWARDS

Chinese government award for outstanding self-financed students abroad (\$ 6000)
Fully funded PhD scholarships from Observatoire de la Côte d'Azur

■ EURASIP Student Travel Grants (€ 750)

Champion of Grand Challenges on NIR Image Colorization in IEEE VCIP (\$ 1000)

ACADEMIC SERVICE & ACTIVITIES

Special Issue Editor for journals including:

■ Remote Sensing

Reviewer for journals including:

■ IEEE journals: T-IP, T-CSVT, T-CAS-II, OJSP, GRSL

■ IEEE conferences: ICASSP

Signal Processing

OTHER WORK EXPERIENCE

CVTE Central Research Institute, Guangzhou, Guangdong, China

Research intern in machine vision

2019 - 2020

2020

LANGUAGES

- Chinese: Native language.
- English: Fluent (speaking, reading, writing).
- French: Elementary.

REFERENCES

Prof. Cédric Richard

Université Côte d'Azur Parc Valrose, 06108 Nice cedex 2, France cedric.richard@unice.fr • +33 04 92 07 63 94

Prof. Jie Chen

Northwestern Polytechnical University No.127, Youyi West Road, Xi'an, Shaanxi, China jie.chen@nwpu.edu.cn • +86 152 9186 8961

■ Dr. Ricardo A. Borsoi

University of Lorraine Campus Aiguillettes, F-54000 Nancy, France ricardo.borsoi@univ-lorraine.fr • +41 76 505 32 89

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