

Xiuheng Wang

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<https://xiuheng-wang.github.io/>

EDUCATION

Université Côte D’Azur, Nice, France

- Ph.D. in Electrical Engineering / Doctorat Sciences pour L’Ingenieur 2021 – present

Northwestern Polytechnical University, Xi’an, Shaanxi, China

- M.S. in Signal and Information Processing 2018 – 2021
- B.S. in Electronic and Information Engineering 2014 – 2018

RESEARCH

Research areas: Machine Learning and Signal Processing, in particular,

- Optimization on manifolds
- Change point detection
- Hyperspectral image analysis

PUBLICATIONS

LONG PAPERS

- X. Wang, R. A. Borsoi, C. Richard, "Non-parametric Online Change Point Detection on Riemannian Manifolds", submitted to International Conference on Machine Learning (ICML), 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, 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, 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, 2022.
- 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, 2022.
- 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, 2023.

SHORT PAPERS

- 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, "Distributed Change Point Detection in Streaming Manifold-valued Signals over Graphs", Asilomar Conference on Signals, Systems and Computers (ASILOMAR), 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, Finland, 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 (ASILOMAR), 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), 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	▪ Fully funded PhD scholarships from Université Côte d'Azur, CNRS, OCA	2021 – 2024
	▪ EURASIP Student Travel Grants (€ 750)	2023
	▪ GdR ISIS mobility grant (€ 325)	2022
	▪ Champion of Grand Challenges on NIR Image Colorization in IEEE VCIP (\$ 1000)	2020

ACADEMIC SERVICE & ACTIVITIES

Reviewer for journals including:

- IEEE journals: TIP, TCSVT, TCAS-II, OJSP, GRSL
- IEEE conferences: ICASSP

OTHER WORK EXPERIENCE

CVTE Central Research Institute, Guangzhou, Guangdong, China

- Research intern in machine vision

2019 – 2020

LANGUAGES

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

REFERENCES

- **Professor Cédric Richard**
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- **Professor Jie Chen**
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