

# Xiuheng Wang

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## EDUCATION

### Université Côte D'Azur, Nice, France

- Ph.D. in Electrical Engineering / Doctorat Sciences pour L'Ingenieur Jun. 2021 – Jun. 2024
  - Supervisor: Professor Cédric Richard
  - Laboratory: Laboratoire Lagrange (UMR CNRS 7293, Observatoire de la Côte d'Azur)
  - Thesis: Joint Modeling and Learning Approaches for Hyperspectral Imaging and Change Point Detection

### 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:** Machine Learning (ML) and Signal Processing (SP), in particular,

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

## PUBLICATIONS

### 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, 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.

### SP CONF. 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.

	<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ 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.</li> </ul>	
<b>SCHOLARSHIPS &amp; AWARDS</b>	<ul style="list-style-type: none"> <li>▪ Fully funded PhD scholarships from Université Côte d'Azur, CNRS, OCA</li> <li>▪ EURASIP Student Travel Grants (€ 750)</li> <li>▪ GdR ISIS mobility grant (€ 325)</li> <li>▪ Champion of Grand Challenges on NIR Image Colorization in IEEE VCIP (\$ 1000)</li> </ul>	2021 – 2024 2023 2022 2020
<b>ACADEMIC SERVICE &amp; ACTIVITIES</b>	Reviewer for journals including: <ul style="list-style-type: none"> <li>▪ IEEE journals: TIP, TCSVT, TCAS-II, OJSP, GRSL</li> <li>▪ IEEE conferences: ICASSP</li> </ul>	
<b>OTHER WORK EXPERIENCE</b>	<b>CVTE Central Research Institute</b> , Guangzhou, Guangdong, China <ul style="list-style-type: none"> <li>▪ Research intern in machine vision</li> </ul>	2019 – 2020
<b>LANGUAGES</b>	<ul style="list-style-type: none"> <li>▪ Chinese: Native language.</li> <li>▪ English: Fluent (speaking, reading, writing).</li> <li>▪ French: Elementary.</li> </ul>	
<b>REFERENCES</b>	<ul style="list-style-type: none"> <li>▪ <b>Professor Cédric Richard</b> Université Côte d'Azur Parc Valrose, 06108 Nice cedex 2, France cedric.richard@unice.fr • +33 04 92 07 63 94</li> <li>▪ <b>Professor Jie Chen</b> Northwestern Polytechnical University No.127, Youyi West Road, Xi'an, Shaanxi, China jie.chen@nwpu.edu.cn • +86 152 9186 8961</li> <li>▪ <b>Ricardo Augusto Borsoi</b> University of Lorraine Campus Aiguillettes, F-54000 Nancy, France ricardo.borsoi@univ-lorraine.fr • +41 76 505 32 89</li> </ul>	

[CV compiled on 2024-05-02]