

Xiuheng Wang

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Address: Campus Aiguillettes, F-54000 Nancy, France.
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APPOINTMENTS	Postdoctoral researcher, Université de Lorraine, Nancy, France	Oct. 2024 – present
EDUCATION	Université Côte D’Azur , Nice, France <ul style="list-style-type: none">Ph.D. in Electrical Engineering / Doctorat Sciences pour L’Ingenieur Jun. 2021 – Jun. 2024<ul style="list-style-type: none">Thesis: Joint Modeling and Learning Approaches for Hyperspectral Imaging and Change Point DetectionSupervisor: Prof. Cédric Richard Northwestern Polytechnical University , Xi’an, Shaanxi, China <ul style="list-style-type: none">M.S. in Signal and Information Processing Sep. 2018 – Mar. 2021B.S. in Electronic and Information Engineering Sep. 2014 – Jul. 2018	
RESEARCH	Research areas: Signal Processing (SP) and Machine Learning (ML), in particular, <ul style="list-style-type: none">Riemannian optimizationChange point detectionHyperspectral imaging	
SELECTED PUBLICATIONS	Full list: https://scholar.google.com/citations?user=xyfMMGIAAAAJ&hl=en JOURNAL AND ML CONF. PAPERS <ul style="list-style-type: none">X. Wang, R. A. Borsoi, C. Richard, A. H. Sayed, “Riemannian Diffusion Adaptation for Distributed Optimization on Manifolds”, International Conference on Machine Learning (ICML), Vancouver, Canada, July 2025.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 <ul style="list-style-type: none">X. Wang, R. A. Borsoi, A. Breloy, C. Richard, “Riemannian Change Point Detection on Manifolds with Robust Centroid Estimation”, European Signal Processing Conference (EUSIPCO), Palermo, Italy, Sep. 2025.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, 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 (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.

WORKSHOPS AND ABSTRACTS

- X. Wang, R. A. Borsoi, C. Richard, “Non-parametric Online Change Point Detection on Riemannian Manifolds”, Statistical Learning for Signal and Image Processing (SLSIP) Workshop, Porquerolles, France, May 2024.
- X. Wang, M. Zhao, J. Chen, C. Richard, “Hyperspectral Image Unmixing with Neural Networks: Integration of Physics-Based and Data-Driven Models”, GdR IASIS Réunion “Apprentissage et modélisation physique”, Paris, France, June 2022.

SCHOLARSHIPS & AWARDS

- **Chinese government award for outstanding self-financed students abroad** (\$ 6000) 2024
- Fully funded PhD scholarships from Observatoire de la Côte d’Azur 2021 – 2024
- EURASIP Student Travel Grants (€ 750) 2023
- Champion of Grand Challenges on NIR Image Colorization in IEEE VCIP (\$ 1000) 2020

ACADEMIC SERVICE & ACTIVITIES

Guest Editor for journals including: Remote Sensing
 Tutorial Speaker for conferences including: IEEE MLSP
 Reviewer for journals and conferences including:

- IEEE journals: T-IP, T-CSVT, T-CAS-II, OJSP, GRSL
- IEEE conferences: ICASSP
- Elsevier journals: Signal Processing

LANGUAGES

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

REFERENCES

- **Prof. Cédric Richard**
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- **Prof. Jie Chen**
 Northwestern Polytechnical University
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- **Dr. Ricardo A. Borsoi**
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