

Xiuheng Wang

dr.xiuheng.wang@gmail.com • +33 06 25 96 30 98

Address: 1 Rue de Bastogne, Vandœuvre-lès-Nancy, 54500, France

Place of birth: 237100, Lu'an, Anhui, China • Date of birth: 4th Sep. 1996

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

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| APPOINTMENTS | Postdoctoral research associate, Université de Lorraine (CRAN) Research Assistant, Université Côte d'Azur | Oct. 2024 – present Jun. 2021 – Jun. 2024 |
| EDUCATION | Université Côte D'Azur , Nice, France <ul style="list-style-type: none">Ph.D. in Electrical Engineering / Doctorat Sciences pour L'Ingenieur • Thesis: Joint Modeling and Learning Approaches for Hyperspectral Imaging and Change Point Detection • Supervisor: Professor Cédric Richard Northwestern Polytechnical University , Xi'an, Shaanxi, China <ul style="list-style-type: none">M.S. in Signal and Information ProcessingB.S. in Electronic and Information Engineering | Jun. 2021 – Jun. 2024 Sep. 2018 – Mar. 2021 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 image analysis | |
| PUBLICATIONS | JOURNAL AND ML CONF. PAPERS <ul style="list-style-type: none">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, 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.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.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. SP CONF. PAPERS <ul style="list-style-type: none">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 (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.

WORKSHOPS AND ABSTRACTS

- M. van den Ende, X. Wang, R. Borsoi, D. Rivet, A. Ferrari, and C. Richard, "Leveraging the spatio-temporal coherence of DAS data for detection and classification", Galileo conference: Fibre Optic Sensing in Geosciences, Catania, Italy, June 2024.
- 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
- 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
- Signal Processing

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**
Université Côte d'Azur
Parc Valrose, 06108 Nice cedex 2, France
cedric.richard@unice.fr • +33 04 92 07 63 94
- **Professor Jie Chen**
Northwestern Polytechnical University
No.127, Youyi West Road, Xi'an, Shaanxi, China
jie.chen@nwpu.edu.cn • +86 152 9186 8961
- **Ricardo Augusto Borsoi**
University of Lorraine
Campus Aiguillettes, F-54000 Nancy, France
ricardo.borsoi@univ-lorraine.fr • +41 76 505 32 89

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