

Fan Wang

Curriculum Vitae

Education

- Jun. 2016 **Ph.D.**, *Computer Science*, INSTITUT NATIONAL DES SCIENCES APPLIQUÉES DE ROUEN, France.
- Jul. 2012 **Postgraduate-Doctoral Program**, *Pattern Recognition and Intelligent Systems*, School of Electronic Engineering, XIDIAN UNIVERSITY, China.
- Jul. 2010 **B.S.**, *Electronic and Information Engineering*, School of Electronic Engineering, XIDIAN UNIVERSITY, China.

Research Experience

- 2017.03–**Postdoctoral Research Associate**, Department of Radiology and BRIC,
Present UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, USA.

Research Interests

Medical Image Analysis

- **Neuroimage Computing** (e.g., infant brain development, cortical surface analysis, functional MRI analysis)
- **Volumetric Image Segmentation** (e.g., lesion segmentation, brain tissue segmentation)

Computer Vision & Pattern Recognition

- **Object Detection, Semantic Segmentation, Image Specularity Removal**

Publications

Medical Image Analysis

- [1] **Fan Wang**, Chunfeng Lian, Zhengwang Wu, Han Zhang, Tengfei Li, Yu Meng, Li Wang, Weili Lin, Dinggang Shen, and Gang Li, "Developmental Topography of Cortical Thickness during Infancy", *Proceedings of the National Academy of Sciences (PNAS)*, 2019.
- [2] **Fan Wang**, Chunfeng Lian, Zhengwang Wu, Li Wang, John Gilmore, Weili Lin, Dinggang Shen, Gang Li, "Revealing Developmental Regionalization of Infant Cerebral Cortex Based on Multiple Cortical Properties", *22nd International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2019)*, 2019. (*early accept*)

- [3] **Fan Wang**, Chunfeng Lian, Pierre Vera, and Su Ruan, "Weakly-supervised Deep Learning for Brain Disease Prognosis using MRI and Incomplete Clinical Scores", *Multimedia Systems*, 2017.
- [4] Li Wang, Dong Nie, Guannan Li, Élodie Puybureau, Jose Dolz, Qian Zhang, **Fan Wang***, et al., "Benchmark on Automatic 6-month-old Infant Brain Segmentation Algorithms: The iSeg-2017 Challenge", *IEEE Transactions on Medical Imaging*, 2019. (*co-first authors*)
- [5] Jing Xia, **Fan Wang**, Zhengwang Wu, Li Wang, Caiming Zhang, Dinggang Shen, Gang Li, "Mapping Hemispheric Asymmetries of the Macaque Cerebral Cortex during Early Brain Development", *Human Brain Mapping*, 2019.
- [6] Jing Xia, **Fan Wang**, Oualid M. Benkarim, Gerard Sanroma, Gemma Piella, Miguel A. González Ballester, Nadine Hahner, Elisenda Eixarch, Caiming Zhang, Dinggang Shen, Gang Li, "Cortical Surface Atlas Parcellation Based on Growth Patterns", *Human Brain Mapping*, 2019.
- [7] Jing Xia, **Fan Wang**, Yu Meng, Zhengwang Wu, Li Wang, Weili Lin, Caiming Zhang, Dinggang Shen, Gang Li, "A Computational Method for Longitudinal Mapping of Orientation-specific Expansion of Cortical Surface in Infants", *Medical Image Analysis*, 2018.
- [8] Gang Li, Li Wang, Pew-Thian Yap, **Fan Wang**, Zhengwang Wu, Yu Meng, Pei Dong, Jaeil Kim, Feng Shi, Islem Rekik, Weili Lin, Dinggang Shen, "Computational Neuroanatomy of Baby Brains: A Review", *NeuroImage*, 2018.
- [9] **Fan Wang**, Chunfeng Lian, Jing Xia, Zhengwang Wu, Dingna Duan, Li Wang, Dinggang Shen, and Gang Li, "Construction of Spatiotemporal Infant Cortical Surface Atlas of Rhesus Macaque", *IEEE 15th International Symposium on Biomedical Imaging (IEEE-ISBI 2018)*, 2018.
- [10] Jing Xia, **Fan Wang**, Zhengwang Wu, Li Wang, Caiming Zhang, Weili Lin, Dinggang Shen, Gang Li, "Charting Development-Based Joint Parcellation Maps of Human and Macaque Brains During Infancy", *IEEE 16th International Symposium on Biomedical Imaging (IEEE-ISBI 2019)*, 2019.
- [11] Jing Xia, Caiming Zhang, **Fan Wang**, Yu Meng, Zhengwang Wu, Li Wang, Weili Lin, Dinggang Shen, Gang Li, "A Computational Method for Longitudinal Mapping of Orientation-Specific Expansion of Cortical Surface in Infants", *IEEE 15th International Symposium on Biomedical Imaging (IEEE-ISBI 2018)*, 2018.
- [12] Jing Xia, Caiming Zhang, **Fan Wang**, Oualid M. Benkarim, Gerard Sanroma, Gemma Piella, Miguel Angel Gonzalez Ballester, Nadine Hahner, Elisenda Eixarch, Dinggang Shen, Gang Li, "Fetal Cortical Parcellation based on Growth Patterns", *IEEE 15th International Symposium on Biomedical Imaging (IEEE-ISBI 2018)*, 2018.
- [13] Zengsi Chen, Zhengwang Wu, Liang Sun, **Fan Wang**, Li Wang, Weili Lin, John H. Gilmore, Dinggang Shen, Gang Li, "Construction of 4D Neonatal COrtical Surface Atlases Using Wasserstein Distance", *IEEE 15th International Symposium on Biomedical Imaging (IEEE-ISBI 2018)*, 2018.

Computer Vision

- [1] **Fan Wang**, Samia Ainouz, Caroline Petitjean, and Abdelaziz Bensrhair, "Specularity Removal: A Global Energy Minimization Approach based on Polarization Imaging", *Computer Vision and Image Understanding (CVIU)*, 2017.
- [2] **Fan Wang**, Samia Ainouz, and Abdelaziz Bensrhair, "Multimodality Semantic Segmentation based on Polarization and Color images", *Neurocomputing*, 2017.
- [3] **Fan Wang**, Samia Ainouz, Caroline Petitjean, and Abdelaziz Bensrhair, "Polarization-based Specularity Removal Method with Global Energy Minimization", *IEEE International Conference on Image Processing (IEEE-ICIP 2016)*, 2016.
- [4] **Fan Wang**, Alina Miron, Samia Ainouz, and Abdelaziz Bensrhair, "Post-Aggregation Stereo Matching Method using Dempster-Shafer Theory", *IEEE International Conference on Image Processing (IEEE-ICIP 2014)*, 2014.

Academic Service

Reviewer of Journals and Conferences

- NeuroImage
- IEEE Transactions on Biomedical Engineering (IEEE-TBME)
- Medical Image Computing and Computer-Assisted Intervention (MICCAI)
- IEEE International Symposium on Biomedical Imaging (IEEE-ISBI)
- IEEE Transactions on Intelligent Transportation Systems (IEEE-TITS)
- Signal Processing
- Neurocomputing
- Multimedia Systems
- Multimedia Tools and Applications