

# Xiaofang WANG

I am a researcher and engineer on machine learning and deep learning and blending them with many real-life applications across computer vision, geography, physics.

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## EDUCATION

**PhD, Ecole centrale de Lyon (ECL), France —**  
*computer vision*

Sep. 2011 - March 2015

Title: Unsupervised image segmentation and multiple object tracking based on graph

**MS, Central south university, ChangSha, China —**  
*Biomedical Engineering*

Sep. 2009 - Jun 2011

Liver CT image segmentation based on active contour models

**BS, Centrale south university, Changsha, China —**  
*Biomedical Engineering*

Sep. 2005 - Jun. 2009

Topic: Medical image segmentation

## TEACHING

**Introduction to algorithms**

First-year engineer, 2015-2017

**Object oriented programming with Python**

First-year engineer, 2015-2017

**Web applications and database**

First-year engineer, 2015-2017

## EMPLOYMENTS

**Siradel, R&D — Saint Gregory**

JAN 2019 - Now

Topic: Aerial imagery understanding

**INRIA, R&D Post-doc — Rennes**

April 2018 - Jan 2019

Topic : Crowd detection, tracking and counting

**ECL, Post-doc fellowship — Lyon**

Sep 2017 - March 2018

Topic : 3D object recognition and retrieval

**ECL, Associate professor — Lyon**

Sep 2017 - March 2018

- Teaching on tutorial courses, group works and projects
- Research on Deep Learning and Domain Adaptation

## SKILLS

**Program language**

Python/ C++/ Matlab/ HTML/CSS/ Javascripts

**Deep Learning Software**

Tensorflow/ Pytorch/ Caffe etc

**Documents software and language**

## PROJECTS

**ECL, Visen** — *tagging the visual content with semantic labels*

2011 - 2015

**ECL, Pikaflex** — *picking and kitting objects with an automatic robot grasp system*

2017 - 2018

**INRIA, SafeCity** — *video understanding and surveillance system applying in key sites within different cities of France*

2018- 2019

## LANGUAGES

**Chinese** – *native speaker*

**English** – *speaking and writing with scientific papers*

**French** – *speaking fluently with french people and teaching with it*

**Point in, Box out: Beyond Counting Persons in Crowds.** Yuting liu, Miaoqing Shi, Qijun Zhao, Xiaofang Wang. IEEE Computer Society Conference on Computer Vision and Pattern Recognition (**CVPR'2019**)

**Visual and Semantic Knowledge Transfer for Large Scale Semi-Supervised Object Detection** Yuxing Tang, Josiah Wang, Xiaofang Wang, Boyang Gao, Emmanuel Dellandrea, and Liming Chen. IEEE transactions on pattern analysis and machine intelligence (**T-PAMI**), 2018, vol. 40, no 12, p. 3045-3058.

Markdown/ Latex/ Word Office etc.

## RESEARCH INTERESTS

**Machine learning** —

- Unsupervised learning
- Weakly supervised learning
- Deep learning
- Domain adaptation

**Computer vision** —

- Image segmentation
- Object tracking
- Image semantic segmentation
- Object localization and recognition
- Scene understanding
- Pose estimation
- Image classification
- Remote imagery classification/ segmentation etc.

## SELECTED PUBLICATIONS

**Active Colloids Segmentation and Tracking**  
Xiaofang Wang, Boyang Gao, Simon Masnou, Liming Chen, Isaac Theurkauff, Cécile Cottin-Bizonne, Yuqian Zhao, Frank Shih  
*Pattern Recognition (PR)* vol.60, pp. 177-188, 2016

**A Global/Local Affinity Graph for Image Segmentation**

Xiaofang Wang, Yuxing Tang, Simon Masnou, Liming Chen. *IEEE Transactions on Image Processing (TIP)*, vol. 24(4), pp.1399-1411, 2015

**Fusing Generic Objectness and Deformable Part-based Models for Weakly Supervised Object Detection**

Yuxing Tang, Xiaofang Wang, Emmanuel Dellandrea, Simon Masnou, Liming Chen  
*IEEE International Conference on Image Processing (ICIP)*, Paris, 2014. (Equal contribution)