

# DONGSHENG YANG

School of Computer and Information Technology, Zip Code :100044  
Beijing Jiaotong University,  
No.3 Shangyuancun, Haidian District, Email: DSYang@bjtu.edu.cn  
Beijing, P.R.China

## Education

### M.Sc. of Signal and Information Processing

09/2014-Present

- Institute of Information Science, Beijing Jiaotong University, Beijing
- Significant Coursework: Image Processing, Pattern Recognition, Information Theory, Digital Signal Processing, Computer Vision, Artificial Neural Network, Human-Computer Interaction, Matrix Analysis
- Thesis Title: Image Fusion Based on NSST and Block Matching Algorithm
- General GPA: 3.43 Ranking: 6/34

### Bachelor of Computer Science and Technology

09/2010-07/2014

- School of Computer and Information Technology, Beijing Jiaotong University, Beijing
- Significant Coursework: Operating Systems, Data Structures, Computer Networks, Computer Architecture, Database Systems, Object-Oriented Programming(C++) , Java, Discrete Mathematics
- Thesis Title: The Research on Blind Restoration Algorithm of Motion-blurred Image
- General GPA: 3.15 Ranking: 34/180

## Current Research Area

Image Fusion, Image De-burring, Image Processing, Computer Vision

## Experiences

### Research Experiences:

#### M.Sc. Student,

#### Institute of Information Science, Beijing Jiaotong University

09/2014-Present

- Main research focus is image fusion.
- Research on transform domain image fusion methods and the design of self-adaptive fusion rules.
- Research on the combined fusion framework of spatial domain and transform domain fusion methods.

#### Assistant Researcher,

#### Institute of Information Science, Beijing Jiaotong University

09/2015-Present

- Main participant of my supervisor Prof. Hu's research project "Shearlet Domain Image Fusion Algorithm Based on Non-local Similarity and BM3D", supported by National Natural Science Foundation of China.
- Apply non-local similarity and collaborative filtering on shearlet domain fusion as well as propose a shearlet-domain fusion method base on "Block-matching and 3D filtering" (BM3D).
- Research on the realization of 3D block-matching and the algorithm design of grouping by similarity.

#### Principal Investigator,

#### Institute of Information Science, Beijing Jiaotong University

01/2016-Present

- Principal investigator of research project "Image Fusion Algorithm Based on 3D Transform and Block-Matching", supported by Graduate Science and Technology Innovation Fund, BJTU.
- Optimizing the effect of image fusion by using block-matching and 3D transform before multi-scale transform

to gain more spatial domain feature information assists transform domain fusion.

### **Project Experiences:**

#### **Developer, Multi Flash Points Recognition Software,**

**China Academy of Railway Sciences**

**04/2015-Present**

- Capture sequential images using the SDK of Baster Industrial Camera and binarize them.
- Use expansion, corrosion and other image processing methods to improve and perfect the existing 8-neighborhood contour tracking algorithm.
- Complete the storage function of uncompressed dual high-definition and high-frame video by C # language.

#### **Developer/Coordinator, Frequency Spectrum Planning Software,**

**Beijing Jiaotong University**

**06/2015-04/2016**

- In consultation with users, understanding user needs and writing the needs analysis report.
- Involve in the programing work of the project, realized the I/O between the Xml and MySQL database in C#.

#### **Part-time Intern,**

**SAP China & School of CIT, Beijing Jiaotong University**

**06/2013-07/2013**

- As a part-time intern, learn to manage and use SAP HANA database and obtain SAP Global Certification.

### **Other Experiences:**

- Linux User: Strong Linux command line skills: Building and configuring Linux server via the command line in the terminal. Establishing website and VPN server on CentOS space provide by DigitalOcean.com

## **Publication**

### **Conference Papers:**

- Yang, Dongsheng; Hu, Shaohai; Sun, Yuchao.(2015).Medical Image Fusion Based on Non-subsampled Shearlet Transform and NSGA-II. (In *The Seventh Chinese Information Fusion Conference (CIFC-2015)*, pp1272-1275.Oct.16-18, Qingdao, China)
- Yang, Dongsheng; Hu, Shaohai; Liu,Shuanqi; Ma,Xiaole.(2016). Block-Matching Based Multimodal Medical Image Fusion via PCNN with SML. (In *International Conference on Signal Processing (ICSP-2016)*, .Nov.7-10, Chengdu, China)

### **Degree Thesis:**

- Yang Dongsheng.(2014).The Research on Blind Restoration Algorithm of Motion-blurred Image : (Bachelor's thesis, Beijing Jiaotong University)

## **Awards & Honors**

- First-level Academic Scholarship, Beijing Jiaotong University, 2015-2016
- Best Paper Award, The Seventh Chinese Information Fusion Conference,10/2015
- Second-level Academic Scholarship, Beijing Jiaotong University, 2014-2015
- First-level Academic Scholarship, Beijing Jiaotong University, 2013-2014
- Third-level Learning Merit Scholarship, Beijing Jiaotong University, 2012-2013

## **Certification**

- IELTS Overall Band Score 6.5 (Listening 7.5, Reading 7.0, Writing 5.5, Speaking 5.5), 08/2015
- SAP Global Certification SAP Certified Application Associate – SAP HANA 1.0, 09/2013

**References available on request**