Zhe Yang

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RESEARCH INTERESTS

Mobile Systems, Machine Learning, Ubiquitous Computing.

EDUCATION

Shanghai Jiao Tong University, Shanghai, China   *Sept. 2014 – Mar. 2017 (expected)*
M.S. in Information and Communication Engineering   Overall GPA: 3.55/4.0
Advisor: Prof. Xinbing Wang

École Centrale de Nantes, Nantes, France   *Sept. 2012 – Aug. 2014*
Dual-degree general engineering program   Overall GPA: 17.2/20
Specialty: Virtual Engineering

Shanghai Jiao Tong University, Shanghai, China   *Sept. 2010 – June 2012*
B.S. in Information Engineering   Overall GPA: 87.4/100

PUBLICATIONS

[1] **Z. Yang**, Y. Bao, C. Luo, X. Zhao, S. Zhu, C. Peng, Y. Liu, X. Wang, "ARTcode: Preserve Art and Code In Any Image", *the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (**UbiComp**), Sept. 2016, Heidelberg, Germany.

[2] **Z. Yang**, Z. Zhang, Y. Bao, X. Gan, X. Tian, X. Wang, "OnTac: Online Task Assignment for Crowdsourcing", *the 2016 IEEE International Conference on Communications* (**ICC**), May 2016, Kuala Lumpur, Malaysia.

[3] Y. Wu, X. Wang, **Z. Yang**, X. Gan, X. Tian, X. Wang, "Crowdclustering Items into Overlapping Clusters", *the 2016 IEEE International Conference on Communications* (**ICC**), May 2016, Kuala Lumpur, Malaysia.

RESEARCH EXPERIENCE

Adaptive Robust Dot Matrix Barcode Implementation (*Leader*)   *Apr. 2015 – Mar. 2016*
In cooperation with Microsoft Research
- Designed Colored Dot Matrix to represent an image with k-means clustering and dithering.
- Introduced a data hiding technique in barcode design to insert as much data into an image as possible with little distortion.
- Designed a reliable ARTcode decoding scheme, composed of a distortion-aware detection algorithm and a comprehensive error correction scheme.
- Conducted experiments under variant scanning conditions, showing that ARTcode achieves a decoding accuracy of 99%; launched a subjective user study and testified that the image preservation quality is acceptable.

Boosting capacity in Multi-color Barcode Streaming (*Member*)   *Apr. 2015 – Feb. 2016*
- Conducted a series of experiments to test the stability of colors within different color spaces under variant illuminance conditions.
- Designed a Hue-based color selection scheme considering the stability of color recognition and interferences among different colors.
- Proposed a robust distortion-aware decoding algorithm and implemented it.
- Conducted experiments to testify the robustness of this barcode under variant conditions.

Online Task Assignment in a Crowdsourcing System (*Leader*)　　　　*May 2015 – Oct. 2015*
- Integrated an online EM algorithm to update parameters in real time with worker labeling each question in a crowdsourcing system.
- Designed a task-worker pairing scheme based on estimated parameters, aimed at enhancing the accuracy while decreasing the cost and running time of the crowdsourcing system.
- Conducted simulations with MATLAB, showing that our algorithm outperforms the conventional EM algorithm in efficiency and accuracy.

PROFESSIONAL EXPERIENCE

MSC Software, Paris, France (*Intern*)　　　　*May 2014 – Aug. 2014*
- This project is a component of a European research project Thermal Overall Integrated Conception of Aircraft (TOICA).
- Extracted geometric data from a 3D CAD model of an Alenia aircraft with Python API inside an MSC Software CAE environment.
- Built up a thermal model of the aircraft based on geometric data and simulated thermal transmissions to optimize the efficiency of heating systems.

Virtual Engineering Project, Nantes, France (*Leader*)　　　　*Feb. 2014 – May 2014*
- Integrated a human behavior tracking system (Kinect) and a virtual reality headset Oculus Rift within a 3D engine Unity3D.
- Used this integrated system to implement a virtual reality ball game with C# and JavaScript.

AWARDS

National Scholarship (top 1%)	*Sept. 2016*
Second Prize in National Postgraduate Mathematic Contest in Modeling	*Oct. 2015*
Academic Scholarship of Shanghai Jiao Tong University, First Class	*Sept. 2015*
National Scholarship of China Scholarship Council	*2012,2013,2014*
Academic Scholarship of Shanghai Jiao Tong University, Second Class	*Sept. 2011*

SKILLS

Programming:	Matlab, LaTeX, C++, Java, Python, C#
Languages:	Chinese (native), English (TOEFL 112, GRE 328+3.5AW), French (fluent)
Tools:	Git, OpenSG, MPI, SQL, Linux, Adobe Illustrator

MISCELLANEOUS

Extracurricular Activities

Volunteer at ACM China Council Shanghai Summit	*May 2016*

 - Logistics, photography.

Vice President of SJTU l'Association Sino-Française	*Sept. 2015 – June 2016*

 - Organized orientations for new exchange program students from France.
 - Organized the first Shanghai Forum of Francophone Students Alliance.

Player at soccer team of SJTU EE Department	*Sept. 2015 – May 2016*
Participator at Laval Virtual Conference 2014	*Mar. 2014*

Hobbies

Playing soccer, cycling, skiing, watching movies, traveling.