

## Wenyuan Yin Ph.D.

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### HIGHLIGHTS

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- Innovative works on user centric mobile multimedia applications with visual content, context and social information
- Strong background and hands-on experience on image/video processing and analysis, mobile multimedia, social media
- Deep understanding and hands-on experience on computer vision, pattern recognition and machine learning
- Solid knowledge and hands-on experience on cloud-based video processing and video coding with FFmpeg and x264
- Proficient in programming with C/C++, Matlab, Python
- Microsoft Research Asia Excellent Intern (*Star of Tomorrow*) Award, 2012
- Best Student Paper Award in VCIP, 2012
- One IEEE Transaction paper was selected as featured article in [Special Technical Community on Social Networks](#) April 2014

### EDUCATION

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- State Univ. of New York at Buffalo  
*Ph.D.*, Computer Science and Engineering Department (GPA: 3.9/4.0) Aug. 2008 – Sep. 2013  
Advisor: Prof. Chang Wen Chen  
Thesis: *Mobile Multimedia: from Acquisition to Adaptation with Semantics, Context and Social Information*
- Nanjing Univ. of Science and Technology, China  
*M.S.*, School of Computer Science and Technology (GPA: 90.0/100.0) Sep. 2006 – Jul. 2008  
*B.E.*, School of Computer Science and Technology (GPA: 88.4/100.0) Sep. 2002 – Jul. 2006

### WORK EXPERIENCE

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- Microsoft Research Asia, Beijing, China Feb. 2012-Jul. 2012  
*Research Intern* Working on the project of Socialized Mobile Photography
- FutureWei Technologies, Inc., Santa Clara, US May. 2011-Jul. 2011  
*Software Engineer Intern* Developing cloud-based media server for real-time media processing
- Computer Science and Engineering Department, SUNY-Buffalo Aug. 2010 – May. 2013  
*Teaching Assistant* Computer Vision and Image Processing; Pattern Recognition; Multimedia Systems; Data Structure in C++

### RESEARCH PROJECTS

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#### *Socialized mobile photography*

- Leverage crowd-sourced knowledge from social media community for mobile photography suggestion, i.e. composition and camera parameter suggestion, considering scene content, context information and social information
- Perform composition learning by selecting dominant visual words and modeling the relationship between spatial distribution of discriminative visual words and composition aesthetics
- Discover photo-worthy viewpoints with visual features and geo-locations for landmarks by clustering, learn view-specific composition rules based on camera operation inferred from visual features, and learn the distance metrics to model diverse effects of various lighting related contexts and shooting content on exposure parameters

#### *Photo quality assessment with content and context*

- Propose an innovative photo quality assessment scheme by learning scene dependent aesthetic model (SDAM) from contextual searched relevant images via jointly utilizing visual content and associated context
- Adopt transfer learning to adaptively transfer photograph aesthetic rules from related auxiliary data of same scene type when contextual searched relevant data is not sufficient for SDAM learning to improve assessment accuracy

### ***User centric semantic media adaptation for mobile device***

- Propose a user centric media adaptation scheme based on media content and user intention to improve user viewing experience considering variation and limitation of mobile display devices
- Develop event-aware semantic extraction scheme to localize semantically important regions utilizing mobile user supplied compact keywords by fusion of bottom-up low level saliency and top-down high level features; Apply relevance feedback for user preference interpretation to guide the media adaptation for mobile users

### ***Social media snippet generation for mobile browsing***

- Propose an innovative social media snippets generation scheme to present rich social media content in attractive, appealing and informative fashion for efficient interested information discovering considering mobile display and viewing condition constraints
- Excerpt salient and dominant elements (both textual and visual contents) from the original media content
- Optimally select and compose the extracted key elements into snippets based on human visual perception principles and aesthetic rules by formulating it as an energy minimization problem

## **HONORS AND AWARDS**

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1. Best Student Paper Award in VCIP, 2012
2. Microsoft Research Asia Excellent Intern (*Star of Tomorrow*) Award, 2012
3. Outstanding Graduate Student, 2006
4. Outstanding Student Award (2 winners/340 students) for 3 consecutive years, 2003-2005

## **PATENTS**

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1. “Socialized Mobile Photography” US Patent (Provisional Application)
2. “Automatic Generation of Social Media Snippets” US Patent (Provisional Application)

## **PUBLICATIONS**

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### **Journal Papers**

1. **W. Yin**, T. Mei, C. W. Chen, “Assessing Photo Quality with Context and Crowd-sourced Photos”, submitted to *IEEE Transactions on Multimedia*
2. **W. Yin**, T. Mei, C. W. Chen and S. Li, “Socialized Mobile Photography: Learning to Photograph with Social Context via Mobile Devices,” *IEEE Transactions on Multimedia*, 16(1): 184-200, 2014 (**selected as featured article** in Special Technical Community on Social Networks, April 2014)
3. **W. Yin**, J. Luo, C. W. Chen, “Event-based Semantic Image Adaptation for User-centric Mobile Display Devices,” *IEEE Transactions on Multimedia*, 13(3): 432-442, 2011

### **Conference Papers**

1. **W. Yin**, T. Mei, C. W. Chen, “ Automatic Generation of Social Media Snippets for Mobile Browsing,” *ACM International Conference on Multimedia*, Oct, 2013
2. **W. Yin**, T. Mei, C. W. Chen, “ Assessing Photo Quality With Geo-Context And Crowdsourced Photos,” *IEEE International Conference on Visual Communications and Image Processing*, Nov, 2012 (**Best Student Paper Award**)
3. **W. Yin**, T. Mei, C. W. Chen, “Crowdsourced Learning To Photograph Via Mobile Devices,” *IEEE International Conference on Multimedia & Expo*, July, 2012
4. **W. Yin**, X. Zhu, C. W. Chen, “Contemporary Ubiquitous Media Services: Content Recommendation and Adaptation,” *Workshop on Pervasive Communities and Service Clouds, IEEE International Conference on Pervasive Computing and Communications*, March, 2011
5. **W. Yin**, J. Luo, C. W. Chen, “Semantic Image Adaptation for User-centric Mobile Display Devices,” *IEEE Communications Society Multimedia Communications Technical Committee E-Letter, invited*, Vol.6, No.1, January, 2011
6. **W. Yin**, J. Luo, C. W. Chen, “User Guided Semantic Image Adaptation for Mobile Display Devices,” *IEEE International Conference on Multimedia & Expo*, July, 2010
7. **W. Yin**, J. Luo, C. W. Chen, “Semantic Adaptation of Consumer Photo for Mobile Device Access,” *IEEE International Symposium on Circuits and Systems 2010*, May, 2010