

## FAN JIANG

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### RESEARCH INTERESTS

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Image/video processing  
Video analysis, retrieval, mining and event detection  
Machine learning, pattern classification and their applications in multimedia and computer vision

### EDUCATION

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2005-present	<b>NORTHWESTERN UNIVERSITY</b> Ph. D. Candidate, Electrical Engineering and Computer Science Advisor: Prof. Aggelos Katsaggelos Co-advisor: Prof. Ying Wu	Evanston, IL
2002-2005	<b>TSINGHUA UNIVERSITY</b> M. S., Electrical Engineering Advisor: Prof. Yujin Zhang	Beijing, CHINA
1998-2002	<b>TSINGHUA UNIVERSITY</b> B. S., Electrical Engineering	Beijing, CHINA

### EXPERIENCE

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2005-present	<b>DEPT OF EECS, NORTHWESTERN UNIV</b> <i>Research Assistant</i> (Advisor: Prof. Aggelos Katsaggelos & Prof. Ying Wu) <ul style="list-style-type: none"><li>Image/video analysis with a focus on anomalous video event detection</li><li>Motion trajectory modeling, clustering and classification</li></ul>	Evanston, IL
Summer 2008	<b>EPSON RESEARCH AND DEVELOPMENT, INC.</b> <i>Intern Student</i> (Advisor: Dr. Jing Xiao) <ul style="list-style-type: none"><li>New algorithm design of content-aware image/video resizing</li><li>Image/video retargeting system development</li></ul>	San Jose, CA
Sept 2006	<b>LAB PROJECT IN COLLABORATION WITH MOTOROLA</b> <i>Research Assistant</i> (Advisor: Dr. Zhu Li (Motorola Multimedia Research Lab) & Prof. Aggelos Katsaggelos) <ul style="list-style-type: none"><li>Visual feature extraction/modeling</li><li>Video shot segmentation</li></ul>	Evanston, IL
2002-2005	<b>DEPT OF EE, TSINGHUA UNIV</b> <i>Research Assistant</i> (Advisor: Prof. Yujin Zhang) <ul style="list-style-type: none"><li>Content-based video analysis, motion segmentation, video parsing</li><li>Development of news video &amp; home video indexing systems</li></ul>	Beijing, CHINA
Sept 2003	<b>HUMAN COMPUTER INTERACTION LAB, TSINGHUA UNIV</b> <i>Visiting Student</i> <ul style="list-style-type: none"><li>Problem solving of speech driven face animation, assigned by visiting Prof. Thomas Huang (UIUC, U.S.) in "Multimedia Signal Processing" class</li></ul>	Beijing, CHINA

## PUBLICATIONS

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- **Fan Jiang**, Ying Wu and Aggelos Katsaggelos, “A dynamic hierarchical clustering method for trajectory-based unusual video event detection,” *IEEE Trans. Image Process.*, vol. 18, no. 4, pp. 907-913, 2009
- **Fan Jiang**, Jing Xiao, Ying Wu and Aggelos Katsaggelos, “Effective and efficient content-aware image/video resizing by anchor point sampling and mapping,” submitted to *IEEE Int'l Conf. on Comput. Vision. (ICCV)*, 2009
- **Fan Jiang**, Ying Wu and Aggelos Katsaggelos, “Detecting contextual anomalies of crowd motion in surveillance video,” submitted to *IEEE Int'l Conf. on Image Process. (ICIP)*, 2009
- **Fan Jiang**, Sotirios Tsaftaris, Ying Wu and Aggelos Katsaggelos, “Detecting anomalous trajectories from highway traffic data,” submitted to *IEEE Int'l Conf. on Image Process. (ICIP)*, 2009
- **Fan Jiang**, Ying Wu and Aggelos Katsaggelos, “Abnormal event detection based on trajectory clustering by 2-depth greedy search,” in *Proc. IEEE Int'l Conf. on Acoust., Speech, and Signal Process. (ICASSP)*, Las Vegas, NV, Mar 2008
- **Fan Jiang**, Ying Wu and Aggelos Katsaggelos, “Abnormal event detection from surveillance video by dynamic hierarchical clustering,” in *Proc. IEEE Int'l Conf. on Image Process. (ICIP)*, vol. 5, pp. 145-148, San Antonio, TX, Sept 2007
- **Fan Jiang** and Yujin Zhang, “Camera attention weighted strategy for video shot grouping,” in *Proc. SPIE Visual Commun. and Image Process. (VCIP)*, vol. 5960, pp. 428-436, Beijing, China, 2005
- **Fan Jiang** and Yujin Zhang, “News video indexing and abstraction by specific visual cues: MSC and news caption,” *Book chapter in Video Data Management and Information Retrieval*, Sagarmay Deb, Eds. Idea Group Inc. and IRM Press, pp. 254-281, 2004

## PATENT

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- U.S. Provisional Patent Application Serial No.: 61/114,886 entitled: “Effective and Efficient Content-Aware Image/Video Resizing by Anchor Point Sampling and Mapping” filed November 14, 2008

## COMPUTER SKILLS

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Familiar with C/C++ and Matlab programming  
Experience with Intel OpenCV, IPL

## REFERENCES

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Prof. Aggelos Katsaggelos  
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