

Alexandre Alahi, Ph.D.

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EMPLOYMENT	Stanford University, CA Research Scientist / Post-doc in the Vision and CVG AI labs (Advisors: Prof. Fei-Fei Li, Prof. Silvio Savarese)	Sep 12 – Present
EDUCATION	Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland - Ph.D. (Advisors: Prof. Pierre Vandergheynst, Prof. Murat Kunt) - B.S.+M.S. Electrical and Computer Engineering	May 07 – Jul 11 Oct 00 – Apr 06
	Carnegie Mellon University (CMU), PA Electrical and Computer Engineering, exchange program	Aug 02 – May 03
TEACHING	Stanford University, CA Teaching , Department of Computer Science - The cutting edge of Computer Vision (50%) (Master) - Several guest lectures in Introduction to CV (Bachelor)	Winter 14 – 16
	EPFL, Switzerland Teaching , Department of Electrical Engineering - Advanced Image Processing and Analysis (100%) (PhD) - Multidimensional Signal Processing (70%) (Master) - Selected topics on Computer Vision (50%) (Master)	May 07 – Jul 11
	Teaching Assistant , Electrical Engineering & Computer Science - UNIX / C / Perl (Bachelor) - Introduction to Information Theory (Bachelor) - Multidimensional Signal Processing (Master) - Selected topics on Computer Vision (Master) - Advanced Image Processing and Analysis (PhD)	
DISTINCTIONS	Swiss NSF Advanced Researcher Grant Award Funding for 1 year of research	Jul 14
	LDV Computer Vision Challenge Award 1 st price winner	Jun 14
	Swiss NSF Early Researcher Grant Award Funding for 18 months of research	Jun 13
	CVPR Best Open Source Award Conf. acceptance rate 24%, 30 finalists, 1 st price winner	Jun 12
	PhD nominated for EPFL PhD prize Awarded to top 5% of Ph.D. students in EPFL	Jul 11
	ICDSC Challenge prize 1 st prize winner to track sport players	Sept 09
VENTURE AWARDS	LDV startup competition award	Jun 14
	PTE elevator pitch award	Jun 12
	Venture Leaders 2010 winner (Top 20 entrepreneurs of the year)	May 10
	Swissnex Boston Global Pitchfest winner	Jul 10
MEDIA COVERAGE	TV: BBC, Euronews, PBS, Voice of America, abc Web: Wall Street Journal, Tech crunch, Engadget, MIT technology review... Radio & Press: rsr.ch, KCBS, 20minutes, leTemp	2011 – Present
OUTREACH	SAILORS: Taught high school students about AI to encourage underrepresented groups to enter the field of AI	Aug 15 – 16

PUBLICATIONS

CONFERENCES

1. Perceptual Losses for Real-time Style Transfer and Super-resolution
J Johnson, A Alahi, L Fei-Fei
European Conference on Computer Vision (ECCV)
(Acceptance rate: 27%) 2016
2. Towards Viewpoint Invariant 3D Human Pose Estimation
A Haque, B Peng, Z Luo, A Alahi, S Yeung, L Fei-Fei
European Conference on Computer Vision (ECCV)
(Acceptance rate: 27%) 2016
3. Knowledge Transfer for Scene-specific Motion Prediction
L Ballan, F Castaldo, A Alahi, F Palmieri, S Savarese
European Conference on Computer Vision (ECCV)
(Acceptance rate: 27%) 2016
4. Learning Social Etiquette: Human Trajectory Understanding In Crowded Scenes
A Robicquet, A Sadeghian, A Alahi, S Savarese
European Conference on Computer Vision (ECCV)
(Acceptance rate: 27%) 2016
5. Vision-Based Hand Hygiene Monitoring in Hospitals
S. Yeung, A. Alahi, A. Haque, B. Peng, Z. Luo, A. Singh, T. Platchek, A. Milstein, L. Fei-Fei, American Medical Informatics Association annual symposium (AMIA) 2016
6. Point-based Path Prediction from Polar Histograms
P Coscia, F Castaldo, FAN Palmieri, L Ballan, A Alahi, S Savarese
International Conference on Information Fusion (FUSION) 2016
7. Social LSTM: Human Trajectory Prediction in Crowded Spaces
A Alahi, K. Goel, V Ramanathan, A. Robicquet, L Fei-Fei, S. Savarese
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
(Spotlight oral, Acceptance rate: 9%) 2016
8. Recurrent Attention Model for Depth-based Person Identification
A. Haque, A Alahi, L Fei-Fei
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
(Acceptance rate: 30%) 2016
9. RGB-W: When Vision Meets Wireless
A Alahi, A. Haque, L Fei-Fei
IEEE Conference on Computer Vision (ICCV)
(Acceptance rate: 19%) 2015
10. Learning to Track: Online Multi-Object Tracking by Decision Making
Y. Xiang, A Alahi, S Savarese
IEEE Conference on Computer Vision (ICCV)
(Oral Acceptance rate: 4%) 2015
11. Socially-aware Large-scale Crowd Forecasting
A Alahi, V Ramanathan, L Fei-Fei
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
(Oral Acceptance rate: 6%) 2014
12. Beyond bits: Reconstructing Images from Local Binary Descriptors
E d'Angelo, A Alahi, P Vanderghenst
International Conference on Pattern Recognition (ICPR) 2012
13. FREAK: Fast Retina Keypoint
A Alahi, R Ortiz, P Vanderghenst
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
Best paper award (Open Source Award Winner) 2012

14. Foreground Silhouette Extraction Robust to Sudden Changes of Background Appearance 2012
A Alahi, L Bagnato, D Matti, P Vandergheynst
IEEE International Conference on Image Processing (ICIP)
15. Stream Carving: an Adaptive Seam Carving Algorithm 2010
D Domingues, A Alahi, P Vandergheynst
IEEE International Conference on Conference on Image Processing (ICIP)
16. Sparsity-driven People localization Algorithm: Evaluation in Crowded Scenes Environments 2009
A Alahi, L Jacques, Y Boursier, P Vandergheynst
Performance Evaluation of Tracking and Surveillance (PETS)
17. Sport Players Detection and Tracking with a Mixed Network of Planar and 2009
Omnidirectional Cameras
A Alahi, Y Boursier, L Jacques, P Vandergheynst
ACM International Conference on Distributed Smart Cameras (ICDSC)
Best paper award (Challenge prize)
18. A Sparsity Constrained Inverse Problem to Locate People in a Network of Cameras 2009
A Alahi, Y Boursier, L Jacques, P Vandergheynst
International Conference on Digital Signal Processing (ICDSP)
19. Object Detection and Matching in a Mixed Network of Fixed and Mobile Cameras 2008
A Alahi, P Vandergheynst, M Bierlaire, M Kunt
ACM conference on Multimedia, Workshop on AREA
20. A Master-slave Approach for Object Detection and Matching with Fixed and Mobile 2008
Cameras
A Alahi, D Marimon, M Bierlaire, M Kunt
IEEE International Conference on Image Processing (ICIP)
21. Object Detection and Matching with Mobile Cameras Collaborating with Fixed Cameras 2008
A Alahi, M Bierlaire, M Kunt
European Conference on Computer Vision (ECCV) Workshop on Multi-camera and
Multi-modal Sensor Fusion Algorithms

JOURNALS

22. Robust Real-time Pedestrians Detection in Urban Environments with Low-resolution 2014
Cameras
A Alahi, M Bierlaire, P Vandergheynst
Journal on Transportation Research Part C: Emerging Technologies
23. SCOOP: A Real-Time Sparsity Driven People Localization Algorithm 2014
M Golbabaee, A Alahi, P Vandergheynst
Journal of Mathematical Imaging and Vision (JMIV)
24. From Bits to Images: Inversion of Local Binary Descriptors 2014
E d'Angelo, Laurent Jacques, A Alahi, P Vandergheynst
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
25. Sparsity Driven People Localization with a Heterogeneous Network of Cameras 2011
A Alahi, L Jacques, Y Boursier, P Vandergheynst
Journal of Mathematical Imaging and Vision (JMIV)
26. Cascade of Descriptors to Detect and Track Objects Across any Network of Cameras 2010
A Alahi, P Vandergheynst, M Bierlaire, M Kunt
Journal on Computer Vision and Image Understanding (CVIU)

BOOK CHAPTERS

27. Tracking Millions of Humans in Crowded Spaces 2017
A Alahi, V Ramanathan, L Fei-Fei
To appear in the book on “Group and Crowd Behavior for Computer Vision” by Elsevier.
28. Learning to Predict Human Behaviour in Crowded Scenes 2017
A Alahi, K. Goel, V Ramanathan, A. Robicquet, A. Sadeghian, L Fei-Fei, S. Savarese
To appear in the book on “Group and Crowd Behavior for Computer Vision” by Elsevier.
29. Biologically-inspired Keypoint 2015
A Alahi, G Goetz, E Angelo
In the book on “Biologically-inspired Computer Vision: Fundamentals and Applications”,
by Wiley. Editors: G Cristobal, M Keil, L Perrinet

PATENTS

30. System and Method for Media Library Navigation and Recommendation 2014
A Alahi, P Vandergheynst, K Benzi
PCT/IB2013/055315
31. Method and System for Automatic Objects Localization 2011
A Alahi, M Golbabaee, P Vandergheynst
EP Patent 2,386,981, US Patent App. 12/779,547
32. System and Method for Measuring Performances of Surveillance Systems 2008
A Azarbayejani, A. Alahi, M Erdem
US Patent App. 20,080/126,031

THESIS

33. Vision-Based Scene Understanding with Sparsity Promoting Priors 2011
A Alahi
Ph.D. thesis from EPFL (nominated for the EPFL PhD prize, top 5%)

INVITED TALKS

- Towards Socially-aware AI
 - SCIEN seminar at Stanford Nov 16
 - ECCV workshop on Multi-Object Tracking Oct 16
 - **Keynote:** IEEE workshop on Machine Learning for Signal Processing Sept 16
- The future of AI and its Impact in our Society
 - United Nation School Sept 16
- Towards Socially-aware AI: Human Behavior Understanding at Scale
 - Cornell Tech Oct 16
 - Facebook Oct 16
 - Sony Sept 16
 - University of Edinburgh May 16
 - Ecole Central Paris May 16
 - Princeton April 16
 - UPenn April 16
 - StonyBrook April 16
 - UCF April 16
- The JackRabbit: A Visually Intelligent Social Robot
 - Bay Area Robotics Symposium, Berkeley Oct 15
- Looking at 42 million people
 - CVPR workshop on “Looking at people” Jun 15
- Tracking Millions of People in the Wild
 - **Keynote:** WACV workshop on multi-target tracking Jan 15

JOURNAL REVIEWER

- IEEE Transaction in Pattern Analysis and Machine Intelligence (PAMI)
- Computer Vision and Image Understanding (CVIU)
- IEEE Transactions on Image Processing (TIP)
- IEEE Signal Processing Letters
- International Journal of Computer Vision (VISI)
- Journal of Mathematical Imaging and Vision (JMIV)
- Journal of Computer Science and Technology
- Transportation Research Part C

ADVISING

Master Students

- Alisha Rege (CS, Stanford) 2016 – Present
- Boya Peng (CS, Stanford) 2016 – Present
- Zelun Luo (CS, Stanford) 2016 – Present
- Agrim Gupta (CS, Stanford) 2016 – Present
- Bryan Anenberg (CS, Stanford) 2015
- Albert Haque (CS, Stanford) 2014 – 2015
- John Doherty (CS, Stanford) 2014
- Pallabi Ghosh (CS, Stanford) 2014 – 2015
- Alexandre Robicquet (CS, Stanford) 2014 – Present
- Judson Wilson (EE, Stanford) 2014 – Present
- Raphael Ortiz (EE, EPFL) 2011-2012
- Michael Bolay (EE, EPFL) 2011-2012
- Damien Matti (EE, EPFL) 2011
- Daniel Domingues (EE, EPFL) 2011
- Romain Jandard (ECE, EPFL) 2011
- Hadrien Mottaz (EE, EPFL) 2010
- William Guicquero (CS, EPFL) 2010
- Onur Gultekin (CS, EPFL) 2010
- Hind Hannouch (EE, EPFL) 2009
- Hamed Izadi (CS, EPFL) 2009

Undergraduate Students

- Emily Tang (CS, Stanford) 2014
- Johan Paratte (EE, EPFL) 2011
- Thomas Frendo (ECE, EPFL) 2010
- Samuel Zare (ECE, EPFL) 2010
- Mohamad Hammoud (ECE, EPFL) 2010
- Karim Mardambey (ECE, EPFL) 2010
- Samuel Egli (EE, EPFL) 2009

FUND

- US government: ONR, IARPA 2015 – 16
- Industrials: Panasonic, Toyota, Nissan, Onlok, LPCH, Intermountain 2015 – 16
- Swiss agency: NSF 2012 – 15
- European agency: FP7 2008 – 12

PROFESSIONAL EXPERIENCE

- **VisioSafe Inc**, Switzerland & US
Co-Founder, offers space analytics. Aug 11 – Present
- **Advisory in several startups** Aug 14 – Present
- **Mitsubishi Electric Research Laboratories**, Cambridge - MA Sep 05 – Mar 06
- **Logitech**, Silicon Valley – CA Feb 04 – Sep 04
- **Cyberonix**, Silicon Valley – CA Summer 03