

# Thiago Teixeira

tvst@google.com

http://thiagot.com

## Research Interests

Internet of Things, Wireless Sensor Networks, Ubiquitous Systems, Embedded Systems, Sensing, Human Detection, Inertial Sensors, Imagers, Computer Vision, Activity/Behavior Inference, Human-Computer Interaction.

## Work and Research Experience

<b>Information Quantitative Team</b> Software Engineer, Google Inc., Team Leader: Carrie Grimes	Nov. 2011 – present
<b>ARLES: Architecture Logicielles et Systèmes Distribués</b> Post-Doctoral Researcher, INRIA Paris-Rocquencourt, Team Leader: Valérie Issarny	Oct. 2010 – Nov. 2011
<b>ENALAB: Embedded Networks and Applications Laboratory</b> Ph.D. fellow, Yale University, Advisor: Andreas Savvides	Sept. 2005 – Sept. 2010
<b>Sensory Communication and Microsystems Laboratory</b> Masters-level researcher, Johns Hopkins University, Advisor: Andreas Andreou	Sept. 2003 – May 2005

## Education

<b>Yale University</b> , Ph.D., Electrical Engineering Advisor: Andreas Savvides	May 2007 – Dec. 2010
<b>Yale University</b> , M.S. & M.Phil. Electrical Engineering Advisor: Andreas Savvides, GPA: 3.83/4.0	Sept. 2005 – May 2007
<b>Johns Hopkins University</b> , M.S.E. Electrical Engineering Advisor: Andreas Andreou, GPA: 3.62/4.0	Sept. 2003 – May 2005
<b>Johns Hopkins University</b> , B.S. Electrical Eng., B.A. Mathematics GPA: 3.54/4.0, Dean's List: Fall 2000, Spring 2000, Fall 2002	Sept. 1999 – May 2003

## Publications

### Journals

1. A. Bamis, D. Lymberopoulos, T. Teixeira and A. Savvides, "The BehaviorScope Framework for Enabling Ambient Assisted Living", Special Issue of the International Journal on Personal and Ubiquitous Computing, Vol. 14, Number 6, 2010.
2. D. Jung, T. Teixeira and A. Savvides, "Sensor node lifetime analysis: Models and tools", ACM Transactions on Sensor Networks, February 2009.
3. D. Lymberopoulos, T. Teixeira and A. Savvides, "Macroscopic Human Behavior Interpretation Using Distributed Imager and Other Sensors", Proceedings of IEEE, October 2008.
4. T. Teixeira and A. Savvides, "Lightweight People Counting and Localizing for Easily-Deployable Indoors WSNs", Journal of Selected Topics in Signal Processing, Special Issue on Distributed Processing in Vision Networks, August 2008.

## Conferences

1. T. Teixeira, D. Jung and A. Savvides, "Tasking Networked CCTV Cameras and Mobile Phones to Identify and Localize Multiple People", ACM International Conference on Ubiquitous Computing (UbiComp) 2010. **One of five finalists to the best paper award.**
2. D. Jung, T. Teixeira and A. Savvides, "Toward Cooperative Localization of Wearable Sensors using Accelerometer and Camera", IEEE International Conference on Computer Communications (Infocom) 2010.
3. T. Teixeira, D. Jung, G. Dublon, and A. Savvides, "Identifying People by Gait-Matching using Cameras and Wearable Accelerometers", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2009.
4. T. Teixeira, D. Jung, G. Dublon, and A. Savvides, "Recognizing Activities from Context and Arm Pose using Finite State Machines", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2009.
5. T. Teixeira, D. Jung, G. Dublon, and A. Savvides, "Identifying People in Camera Networks using Wearable Accelerometers", Proceedings of the international conference on Pervasive Technologies Related to Assistive Environments (PETRA) 2009.
6. A. Bamis, D. Lymberopoulos, T. Teixeira, and A. Savvides, "Towards precision monitoring of elders for providing assistive services", Proceedings of the international conference on Pervasive Technologies Related to Assistive Environments (PETRA) 2008.
7. D. Lymberopoulos, T. Teixeira and A. Savvides, "Detecting Patterns for Assisted Living Using Sensor Networks: A Case Study", In Proceedings of the International Conference on Sensor Technologies and Applications (SensorComm) 2007, Valencia, Spain, October 2007.
8. T. Teixeira and A. Savvides, "Lightweight People Counting and Localizing in Indoor Spaces using Camera Sensor Nodes", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2007.
9. D. Jung, T. Teixeira, A. Barton-Sweeney and A. Savvides, "Model-Based Design Exploration of Wireless Sensor Node Lifetimes", Proceedings of the Fourth European Conference on Wireless Sensor Networks, EWSN 2007.
10. T. Teixeira, E. Culurciello, E. Park, D. Lymberopoulos, A. B. Sweeney, and Andreas Savvides, "Address-Event Imagers for Sensor Networks: Evaluation and Modeling", In Proceedings of Information Processing in Sensor Networks (IPSN), SPOTS track, April 2006.
11. T. Teixeira, E. Culurciello and A. Andreou, "An Address-Event Image Sensor Network", IEEE International Symposium on Circuits and Systems (ISCAS), 2006.
12. G. Cauwenberghs, A. G. Andreou, J. West, M. Stanacevic, A. Celik, P. Julian, T. Teixeira, C. Diehl, and L. Riddle, "A miniature, low-power, intelligent sensor node for persistent acoustic surveillance", in Proc. SPIE Defense and Security Symposium, 2005.
13. T. Teixeira, E. Culurciello and A. Andreou, "Event-based imaging with active illumination in sensor networks", IEEE International Symposium on Circuits and Systems (ISCAS), 2005.

## Workshops

1. A. Yu, A. Bamis, D. Lymberopoulos, T. Teixeira and A. Savvides, "Personalized Awareness and Safety with Mobile Phones as Sources and Sinks", Proceedings of Urbanse 2008, workshop held in conjunction with ACM SenSys 2008.
2. T. Teixeira, D. Lymberopoulos, and A. Savvides, "Experiences from a Home Sensor Network deployment for Assisted Living", In the International Workshop on Wireless Sensor Network Deployments (WiDeploy), 2007.
3. T. Teixeira, D. Lymberopoulos, E. Culurciello, Y. Aloimonos and A. Savvides, "A Lightweight Camera Sensor Network Operating on Symbolic Information", Proceedings of the First Workshop on Distributed Smart Cameras 2006, held in conjunction with ACM SenSys 2006.

## System Demonstrations

1. D. Lymberopoulos, A. Bamis, T. Teixeira, A. Savvides, "BehaviorScope: Real-Time Remote Human Monitoring Using Sensor Networks", Information Processing in Sensor Networks (IPSN) 2008.
2. T. Teixeira, D. Lymberopoulos, A. Barton-Sweeney and A. Savvides, "Address-Event Imagers and Turnsores", Information Processing in Sensor Networks (IPSN) 2005.

## Technical Reports

1. [T. Teixeira](#) and A. Savvides, "A Human-Sensing System using Cameras and Wearable Inertial Sensors".
2. [T. Teixeira](#), G. Dublon and A. Savvides, "A Survey of Human-Sensing: Methods for detecting Presence, Count, Location, Track and Identity".
3. D. Lymberopoulos, [T. Teixeira](#) and A. Savvides, "BScope: A Scalable, Run-Time Architecture for Activity Recognition Using Wireless Sensor Networks", ENALAB Technical Report, April 2007.
4. D. Lymberopoulos, A. Barton-Sweeney, [T. Teixeira](#) and A. Savvides, "An Easy-to-Program Sensor System for Parsing Human Activities", ENALAB Technical Report, May 2006.

## Talks

### Invited Talks

1. "Construindo a Internet das Coisas", Universidade de São Paulo, August 2011.

### Conferences and Workshops

1. "Tasking Networked CCTV Cameras and Mobile Phones to Identify and Localize Multiple People", ACM International Conference on Ubiquitous Computing (UbiComp) 2010.
2. "Identifying People by Gait-Matching using Cameras and Wearable Accelerometers", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2009.
3. "Recognizing Activities from Context and Arm Pose using Finite State Machines", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2009.
4. "Identifying People in Camera Networks using Wearable Accelerometers", Proceedings of the international conference on Pervasive Technologies Related to Assistive Environments (PETRA) 2009.
5. "Lightweight People Counting and Localizing in Indoor Spaces using Camera Sensor Nodes", Proceedings of the ACM/IEEE Conference on Distributed Smart Cameras (ICDSC) 2007.
6. "Address-Event Imagers for Sensor Networks: Evaluation and Modeling", In Proceedings of Information Processing in Sensor Networks (IPSN), SPOTS track, April 2006.
7. "A Lightweight Camera Sensor Network Operating on Symbolic Information", Proceedings of the First Workshop on Distributed Smart Cameras 2006, held in conjunction with ACM SenSys 2006.

## Professional Activities

### Reviewer for Research Grants

1. ANR — Agence Nationale de la Recherche, France

### Reviewer for Journals and Transactions

1. Proceedings of the IEEE
2. IEEE Journal of Selected Topics in Signal Processing
3. IEEE Transactions on Signal Processing
4. Elsevier Journal of Systems and Software

## Reviewer for Conferences

1. IPSN — ACM/IEEE International Conference on Information Processing in Sensor Networks
2. EWSN — European Conference on Wireless Sensor Networks
3. Pervasive — International Conference on Pervasive Computing
4. DCOSS — IEEE/ACM International Conference on Distributed Computing in Sensor Systems
5. ISCAS — IEEE International Symposium on Circuits and Systems
6. ICDCS — IEEE International Conference on Distributed Smart Cameras
7. ETS — IEEE European Test Symposium

## Technical Skills

### Programming and Hardware Design Languages

1. Proficient: C, Java, JavaScript, Matlab, Python
2. Intermediate: C++, C#, VHDL

### Markup and Query Languages:

1. Proficient: HTML, XHTML, XML, CSS,  $\LaTeX$
2. Intermediate: MySQL, XSL

### Tools, Libraries, Frameworks and Environments:

1. Proficient: MATLAB, Octave, Pylab, MS Visual Studio, Eclipse
2. Intermediate: R, OpenCV, Django, Xilinx ISE, Modelsim, Cadence, HSPICE simulator

## Languages

Portuguese: Native    English: Fluent    Spanish: Intermediate    French: Reading

## References

*To obtain a version of this CV containing a list of references, please contact me directly.*