

# Jeremy D. Jackson

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- Objective** An application driven/research oriented position using computer vision and machine learning.
- Education**
- 2001-2007 **Georgia Institute of Technology** Atlanta, GA  
Ph.D. in Electrical and Computer Engineering  
Research Area: Computer Vision/Partial Differential Equations (PDE's)  
GPA: 3.7/4.0
- 1997-2001 **Tulane University** New Orleans, LA  
B.S. in Electrical Engineering and Computer Science  
Summa cum Laude with Departmental Honors  
GPA: 3.9/4.0
- Experience**
- Fall 2007 to present **Harris Corporation** Melbourne, FL  
*Software Engineer*  
Create real-time computer vision based applications implemented in C++. Use deep learning and statistical machine learning methods in the areas of Object Recognition and Detection, Tracking, Video Analytics, Lidar, Radar, and Medical Image Registration. Image/Video Analytics, Medical Image Registration, Radar, and Lidar. Systems include GPU/Cuda, Grid Engine computing, Matlab, AWS, and Azure. Led a team to process Maritime time series data using Deep Learning, Agile/Scrum, C++, and Python. Have TS/SCI clearance
- Fall 2001 to 2007 **Georgia Institute of Technology, School of Electrical and Computer Engineering** Atlanta, GA  
*Research Assistant for Dr. Anthony Yezzi, Jr.*  
Designed and implemented vision systems for segmentation, registration, and tracking using Curve Evolution through PDE's with C++ and Tcl/Tk.
- Summer 2005 **Hewlett-Packard Labs** Palo Alto, CA  
*Intern for Tom Malzbender*  
Work in Image-Based Relighting of a scene with high specularities using Visual C++ and OpenGL/Glut.
- Fall 2000, Spr. 2001 **Tulane University, Department of Electrical Engineering and Computer Science** New Orleans, LA  
*Teaching Assistant for Computer Organization (Assembly) and Digital Logic*  
Taught a weekly lab to code and debug Sparc Assembly programs and taught a lab involving design using 7400 series chips.

- Summer 2000      **Federal Express Services**      Memphis, TN  
*Intern for E-Procurement Systems*  
 Wrote Perl scripts, Shell scripts, and PL/SQL (Oracle) in an HP/UX environment to generate web page graphs and charts that describe internal sales data.
- Summer 1999      **JCPenney IS Development**      Dallas, TX  
*Intern for IS Development*  
 Wrote Visual Basic and SQL for an Excel Project that tracked deliveries for 35 stores. Authored SQL stored procedures for use in Crystal Reports.
- Summer 1998      **Sequel (Toshiba)**      Memphis, TN  
*Laptop Repair Technician*  
 Repaired and troubleshot Laptops for Toshiba.

**Skills**

**Programming Languages:** C++, Python, Shell Scripting, Tcl/Tk, Java, Perl, Sparc and Intel Assembly, PL/SQL  
**Operating Systems:** Linux/Unix, Windows  
**Software:** Microsoft Visual Studio, gcc, g++, gdb, Matlab, Mathematica, OpenGL, JDK

**Publications**

Jeremy D. Jackson, John Henderson, Donald Lieb, and Thomas McDowall,  
 “Beam Modulation and Interferometry for Geolocation of Moving Vessels Using Synthetic Aperture Radar Phase History Data,”  
 2012 NRO/NSA Geolocation Conference.

Jeremy D. Jackson, Anthony Yezzi Jr., Stefano Soatto,  
 “Dynamic Shape and Appearance Modeling via Moving and Deforming Layers,”  
*International Journal of Computer Vision* 2007.

Layered Deformation with Radiance:  
 A Model for Appearance, Segmentation, Registration, and Tracking  
*PhD Thesis, 2007*

Jeremy D. Jackson, Anthony J. Yezzi, Stefano Soatto,  
 “Joint Priors for Shape and Appearance Modeling”  
*Beyond Multiview Geometry Workshop, CVPR 2007.*

G. Sundaramoorthi, Jeremy D. Jackson, A. Yezzi Jr., A. Mennucci,  
 “Tracking with Sobolev Active Contours,”  
*Computer Vision and Pattern Recognition* 2006.

Jeremy D. Jackson, Anthony Yezzi Jr., Stefano Soatto,  
 “Dynamic Shape and Appearance Modeling via Moving and Deforming Layers,”  
*Energy Minimization Methods in Computer Vision and Pattern Recognition* 2005.

Jeremy D. Jackson, Anthony Yezzi Jr., Stefano Soatto,

“Tracking Deformable Moving Objects Under Severe Occulsions,”  
*2004 Conference on Decision and Control.*

Jeremy D. Jackson, Anthony Yezzi Jr., Wes, Wallace, Mark F. Bear,  
“Segmentation of Coarse and Fine-Scale Features Using Multi-Scale Diffusion  
and Mumford-Shah,” *Scale Space Methods in Computer Vision, 4<sup>th</sup> International  
Conference, Scale Space 2003.* pp. 615-624.

## **Patents**

David M. Bell, Lauren S. Burrell, Jeremy D. Jackson, Timothy R. Culp. 2012.  
Medical Image Analysis System Using N-Way Belief Propagation for  
Anatomical Images Subject to Deformation and Related Methods.  
Patent No. PCT/US2010050801, Filed Sept 2010, and issued May 2012.

David M. Bell, Lauren S. Burrell, Jeremy D. Jackson, Timothy R. Culp. 2012.  
Medical Image Analysis System for Anatomical Images Subject to Deformation  
and Related Methods. Patent No. PCT/US2010050799, Filed Sept 2010, and  
issued May 2012.

David M. Bell, Lauren S. Burrell, Jeremy D. Jackson, Timothy R. Culp. 2012.  
Medical Image Analysis System for Displaying Anatomical Images Subject to  
Deformation and Related Methods. Patent No. PCT/US2010050800, Filed Sept  
2010, and issued May 2012.

Jay Hackett, Tariq Bakir, Jeremy D. Jackson, Richard Cannata, Ron Riley. 2012.  
Video Summarization Using Video Frames From Different Perspectives.  
US Patent Application 2012/0027371 A1, Filed Jul 2010. Patent Pending.

*References available upon request.*