

# M. Phil Salesses

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## Current Position

Research Assistant and Graduate Student  
The Media Laboratory - Macro Connections  
Massachusetts Institute of Technology  
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## Education

**Massachusetts Institute of Technology**, Cambridge, MA  
Master of Science (S.M.), The Media Laboratory, May 2012 (expected)

**James Madison University**, Harrisonburg, VA  
Bachelor of Science (B.S.), Geographic Science, May 2009

**George Mason University**, Fairfax, VA  
Attended 2006-2007

**United States Naval Academy**, Annapolis, MD  
Attended 2004-2006

## Clearance

Top Secret/Sensitive Compartmentalized Information (TS/SCI)  
Adjudicating Authority: Department of Defense

## Research Interests

Network science, collaborative filtering, ambient interfaces, remote sensing, complex data visualization, human-computer interaction, spatial analysis

## Skills

*Programming languages:* C, C++, Java, Matlab, Python, JavaScript, ActionScript 3, PHP, ASP, SQL, CSS, XHTML, XML

*Hardware:* AVR microcontrollers, LIDAR, 3D printers, wireless networking hardware, common input sensors, P3-AT robotic research platform, Immersive Media 360° camera system, Arduino prototyping platform

*Software:* Adobe Creative Suite 4 Master Collection, Microsoft Office Suite, Matlab, Processing, Quick Terrain Modeler, ArcInfo Suite, ArcServer

*Fabrication:* Water jet cutter, laser cutter, Numerical Control (NC) mills, 5-axis machining, Printed Circuit Board (PCB) design and fabrication, molding and casting

*Platforms:* Mac OS X 10.2+, UNIX, Windows XP/7, IIS 6/7, Ubuntu Linux 9.0+

## Professional Experience

**Massachusetts Institute of Technology** Cambridge, Massachusetts

*Research Assistant, Media Lab - Macro Connections (9/10 - Present)*

- Developed an application to extract human preferences by converting a previously subconscious process into something conscious

*Research Affiliate, Media Lab - Smart Cities (5/10 - 9/10)*

- Researched joystick control protocol and standards for the CityCar project
- Designed rapid charging station exhibit for "Sponsor Week" with team of three

*Research Affiliate, Lab for Manufacturing and Productivity - Robotic Mobility Group (4/10 - 9/10)*

- Researched methods for localizing a robot in a GPS-denied environment
- Contributed code to stem spacing and stem diameter estimation algorithm

**US Army Corps of Engineers - Engineer Research and Development Center** Alexandria, Virginia

*Principal Investigator (10/09 - 9/10)*

- Lead basic research project with the goal of developing vegetation classification algorithms using LIDAR and visible/NIR imagery collected from an unmanned ground vehicle

*Geographer (5/08 - 10/09)*

- Programmed specialized application allowing users to view high-resolution 360° street level imagery in a web browser, similar to Google Street View™
- Developed novel visualization system utilizing Adobe Flex API, AIR, SQLite, and ActionScript 3.0 that processes BuckEye imagery data for dissemination and viewing within minutes of a completed mission
- Examined standard Line of Sight algorithms and created an application specific, HDF5 based, hybrid algorithm that performs 59% fewer mathematical calculations and computes two times faster, returning the same result

**PhilSalesses.com** Burke, Virginia

*Freelancer (1/01 - 6/09)*

- Designed user interface, layout, typography, and functionality of nineteen web sites
- Programmed nine web applications and integrated an additional twelve with customer's existing architecture
- Ported "Plasma Pong," named one of the top five indie games by WIRED magazine, to the Mac OS X platform

**Redvent, Inc.** Harrisonburg, Virginia

*President (1/06 - 5/08)*

- Founded web development company that delivered Linux, Apache, MySQL and PHP solutions (LAMP)
- Built relationships with eleven clients over two and a half year period

**Marriott International, Inc.** Bethesda, Maryland

*Financial Analyst (3/07 - 8/07)*

- Initiated, designed and programmed automated ordering system that allowed purchasing agents to place hotel technology orders automatically, eliminating 6.5 hours of work each day, per agent

**Apple, Inc.** McLean, Virginia

*Business Consultant (12/05 - 3/07)*

- Managed a team of six, tasked with raising small-business related sales from 4% to 20% of area sales revenue

- Reorganized the small-business team and achieved set sales goals, in only two quarters, by driving \$3.2 million of business in Q1 2007; 21% of total sales
- Spearheaded effort by generating over \$1 million in sales revenue personally for Q1 2007

**United States Navy** Annapolis, MD

*Midshipman* (7/04 - 11/05)

- Served as crew aboard 44' Sail Training Craft during CSNTS (Newport, RI to Norfolk, VA) open ocean sailing cruise
- Served as crew aboard the USS Norfolk, an L.A. Class Nuclear Submarine during summer cruise

**AllLacrosseAmerica.com** Alexandria, VA

*Web Manager* (6/01 - 3/03)

- Designed and developed lacrosse news and portal website that attracted over 272,000+ users monthly
- Designed and implemented the world's first Flash-based lacrosse video game
- Increased revenue by advertising 110% during two year tenure

**Honors and Awards**

Student of the Year, Edison Academy	2003
Outstanding Achievement Award, Edison Academy	2003
Golden Web Award	2003
Canadian Web Award	2003
Design chosen as Microsoft's "killer web site of the month"	1999

**Exhibitions**

- "Sea Swarm" - la Biennale de Venezia, Venice, Italy (2010)
- "Army Geospatial Center" - ESRI, San Diego, CA (2010)
- "CityCar Charging Station" - MIT Media Lab, Cambridge, MA (2010)

**Invited Talks**

- "The Tourist Project" - ESRI Classified Intelligence Session, San Diego, CA (2010)
- "Oil Eating Robots" - TEDxOilSpill, Washington, DC (2010)
- "Ground Plane Estimation using LIDAR" - Topographic Engineering Center, Alexandria, VA (2009)
- "Vegetation Classification and Modeling" - USACE R&D Conference, Memphis, TN (2009)

**Academic Activities**

- Top Third (Divine Abstraction) - Microsoft's College Puzzle Challenge - Cambridge, MA (2010)
- 1st Place (USNA) - National Security Agency's Cyber Defense eXercise - Annapolis, MD (2005)

**Affiliations**

- Armed Forces Communications and Electronics Association, Northern VA Chapter
- National Military Intelligence Association
- North American Cartographic Information Society
- Free and Accepted Masons, Rockingham Union Lodge Number 27

**Personal Activities**

I enjoy photography, backpacking, ping pong and hunting for the perfect spicy tuna roll.