

SORIN C. POPESCU

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EDUCATION

Ph.D. Dept. of Forestry, Virginia Tech (2002)
Diploma degree, Forest Engineer “Transilvania” University of Brasov
Faculty of Forestry, Brasov, Romania (1992)

HONORS AND GRANTS

First Honorable Mention, American Society for Photogrammetry and Remote Sensing (ASPRS) 2005 Talbert Abrams Award for publications in Photogrammetric Engineering & Remote Sensing, "Seeing the Trees in the Forest: Using Lidar and Multispectral Data Fusion with Local Filtering and Variable Window Size for Estimating Tree Height", PE&RS, 70-5, pp. 589-604

Texas A&M University, Computer Access/Instructional Technology Fee (CA/ITF) FY2005, \$5010 (ENVI/IDL 25 seats lab license)

TexasView Consortium, 2005, Remote Sensing: Picture the Future, \$5000

Lidar Remote Sensing of Forest Fuel Loads and Fire Risk Assessment in Texas: Award #: 02-DG-11083148-050, Texas Forest Service, 2003-2005, \$243,000

NASA award #: NNG04GM34G. Airborne LIDAR for Natural Resources Applications, NASA, 2004-2007, \$82,000

3rd place Fourth Annual *Geospatial Solutions* Applications Contest 2003

NASA Earth System Science Fellowship, September 1999 – 2002

American Society for Photogrammetry and Remote Sensing (ASPRS) Graduate Student Award 2002 – LH Systems Internship Award (at Leica Geosystems, San Diego, CA)

ASPRS – Potomac Region and North Carolina Chapter Student Scholarship 2002

NASA Graduate Student Summer Program, June – July 1998

European Forest Institute – summer school travel grants: July 1997 and June 1995

PROFESSIONAL EXPERIENCE

JULY 2003 – PRESENT	Assistant Professor, Spatial Sciences Laboratory Dept. of Forest Science, Texas A&M University
AUGUST 2002 – JUNE 2003	Postdoctoral Research Associate, Dept. of Forestry, Virginia Tech, USA
AUGUST 1997 – MAY 2002	Graduate Research and Teaching Assistant Department of Forestry, Virginia Tech, USA
JUNE-AUGUST 1997	GIS Analyst Canadian Geomatic Solutions Ltd., Calgary, Alberta, Canada
JUNE - AUGUST 1996	Research Assistant

Dept. of Forest Biometrics, University of Freiburg, Germany
SEPTEMBER 1992 - MAY 1997 Assistant Lecturer, Dept. of Forest Management,
"Transilvania" University of Brasov, Romania

RESEARCH INTERESTS

Remote sensing applications in natural resources and forest sciences, assessment of forest fuels and fire risk, forest volume and biomass, land use and land cover change, forest carbon sources and sinks, global environmental change

New optical, digital, and lidar remote sensors, multisensor data fusion, algorithm and software development for automated image processing, DEM generation, vegetation extraction and assessment

PUBLICATIONS

Peer-reviewed

Hopkinson, C., S.C. Popescu, M. Flood, and R. Maher. A study on the need for LiDAR training. Submitted to Photogrammetric Engineering & Remote Sensing (In press)

Popescu, S.C., R.H. Wynne and J.A. Scrivani, 2004. Fusion of small-footprint lidar and multispectral data to estimate plot-level volume and biomass in deciduous and pine forests in Virginia, U.S.A. *Forest Science*: 50(4): pp. 551 -- 565

Popescu, S.C. and R.H. Wynne, 2004. Seeing the trees in the forest: using lidar and multispectral data fusion with local filtering and variable window size for estimating tree height. *Photogrammetric Engineering & Remote Sensing*. 70(5): 589-604

Popescu, S.C., R.H. Wynne, and R.E. Nelson, 2003. Measuring individual tree crown diameter with lidar and assessing its influence on estimating forest volume and biomass. *Canadian Journal of Remote Sensing*. Vol. 29, no. 5., pp. 564-577

Oderwald, R.G. and S.C. Popescu, 2003. A simplified method of predicting percent volume in log portions. *Southern Journal of Applied Forestry*. Vol. 27, no. 3, pp. 149-152

Popescu, S.C, R.H. Wynne and R.E. Nelson, 2002. Estimating plot-level tree heights with lidar: local filtering with a canopy-height based variable window. *Computers and Electronics in Agriculture*, Elsevier Science, Vol. 37(1-3), p. 71-95

Non-refereed, editor-reviewed

Popescu, S.C., P.J. Radtke, and R.H. Wynne, 2003. Forest measurements with airborne and ground-based laser scanning. *Geospatial Solutions*, Vol. 13, no. 8, pp. 18. (3rd place Fourth Annual Geospatial Solutions Applications Contest)

Selected conference proceedings

Radtke, P., J.G. Henning, S.C. Popescu, and R.H. Wynne. The role of terrestrial laser scanning in assessing forest attributes. CD-ROM Proceedings: ASPRS 2004 Annual Conference, May 23-28, 2004, Denver, Colorado, U.S.A.

- Sforza, P., R.H. Wynne, S.C. Popescu, and Z. Bortolot. The power of 3-D visualization and immersive virtual environments for improving lidar processing algorithms. CD-ROM Proceedings: ASPRS 2004 Annual Conference, May 23-28, 2004, Denver, Colorado, U.S.A.
- Popescu, S.C. and R.H. Wynne, 2002. Seeing individual trees in the forest: estimating forest biomass and volume with small-footprint lidar. CD-ROM Proceedings: ASPRS 2002 Annual Conference, April 19-26, Washington, D.C.
- Popescu, S.C. and R.H. Wynne, 2001. Estimating tree heights and stand density with high-performance lidar: initial results from a case study in the Virginia Piedmont. CD-ROM Proceedings: ASPRS 2001 Annual Conference, April 23-27, St. Louis, MO
- Popescu, S.C., R.H. Wynne and R.E. Nelson, 2000. Estimating forest vegetation biomass using airborne lidar measurements. In Proceedings: Second International Conference on Geospatial Information in Agriculture and Forestry, 10-12 January 2000, Lake Buena Vista, Florida, USA. Vol. II: 346-353
- Popescu, S., 1997. An introduction to the potential of GIS and DEMs for spatial analysis at landscape level. In Forest Scenario Modelling for Ecosystem Management at Landscape Level. G.J. Nabuurs, T. Nuutinen, H. Bartelink and M. Korhonen (editors). Proceedings of the International Seminar and Summer School, Wageningen, the Netherlands. p.137-146

INVITED PRESENTATIONS – NATIONAL AND INTERNATIONAL CONFERENCES

- Popescu, S.C. and M. Flood. Developing LIDAR curriculum: incorporating industry perspectives. ASPRS 2004 Annual Conference, May 23-28, 2004, Denver, Colorado, U.S.A.
- Popescu, S.C. and R.H. Wynne. Forest biomass estimation with high density multiple return LiDAR and coregistered optical data: Local filtering with a variable window size based on canopy height and forest type. Workshop on Three-Dimensional Analysis of Forest Structure and Terrain Using LiDAR Technology, March 14-15, 2002, Victoria, B.C., Canada

SELECTED RECENT PRESENTATIONS (2005 AND 2006)

International conferences:

- Popescu, S.C. and K. Zhao. When every LIDAR point counts: analyzing the point cloud with a height bin approach to assess individual tree species. Silviscan: LIDAR Applications in Forest Assessment and Inventory, Blacksburg, VA, Sept 29 – Oct 1, 2005 (international series of forestry LIDAR conferences; previous meetings: March 14-15, 2002: 3-D Analysis of Forest Structure, Victoria, BC, Canada; September 2-4, 2003: ScandLaser, Umea, Sweden; October 3-6, 2004: NatScan, Freiburg, Germany)
- Popescu, S.C. Developing accurate tools to estimate forest biomass: LIDAR data and processing methods. IEA Bioenergy Task 31, Perth, Australia, July 31 – August 5, 2005.

National conferences:

Popescu, S.C. and K. Zhao. When every LIDAR point counts: analyzing the point cloud with a height bin approach to assess individual tree species and canopy parameters. ASPRS National Conference, Reno, Nevada, May 1-6, 2006.

Popescu, S.C. Seeing the trees made easy: a software application for detecting and measuring trees with LIDAR. Society of American Foresters National Convention, Fort Worth, Texas, Oct. 19-23, 2005

Sorin Popescu, M. Mutlu, K. Zhao, A. Rutledge, and C. Stripling. Assessing forest fuel loads with lidar: a case study in east Texas. ASPRS National Conference, Baltimore, MD, March 7-11, 2005

REVIEWS

Forest Science, Journal of Forestry, Journal of Mathematical Modeling, BioScience, Canadian Journal of Forest Research, Scandinavian Journal of Forest Research, Photogrammetric Engineering & Remote Sensing, Forest Ecology and Management, IEEE Geoscience and Remote Sensing, Natural Resources Modeling, Agronomy Journal

REMOTE SENSING COURSES TAUGHT AT TEXAS A&M UNIVERSITY SINCE 2003

FRSC398 Interpretation of Aerial Photographs

REN444 Remote Sensing in Renewable Natural Resources

FRSC608 Remote Sensing for Natural Resources Management

FRSC661 Advanced Remote Sensing

SERVICE

Professional

Member of NASA Review Panel for proposal funding in Remote Sensing Science (RSS) for Carbon and Climate, NASA, Washington, D.C., Nov 7-8, 2005

Member on Steering Committee, Silviscan: Lidar Applications in Forest Assessment and Inventory, International Conference, Blacksburg, VA, Sept. 29-Oct. 1, 2005

Workshop instructor: Looking above the terrain model: LIDAR processing and applications for characterizing forest vegetation. ASPRS 2006 Annual Conference, May 1-5, 2006, Reno, Nevada, U.S.A.

Workshop instructor: When Vegetation Is Not A Nuisance For LIDAR Processing: An Introduction To Forestry Lidar Applications. ASPRS 2004 Fall Conference, September 13th, 2004 Kansas City, Missouri, U.S.A.

Prepared MOU and serve as point of contact for Texas A&M University in the TexasView consortium of academic institutions with remote sensing curricula

Department of Forest Science and Texas A&M University

Mentor, Norman E. Borlaug International Science and Technology Fellows Program, 2005. Previously, in September 2004; Protégé: Milic B. Curovic, University of Montenegro, Department of Forestry, Podgorica, Montenegro

Member Graduate Program Committee, Department of Forest Science

Faculty Advisor, TAMU Student Chapter of ASPRS (American Society for Photogrammetry and Remote Sensing)

Organized the Remote Sensing event of the Texas Science Olympiad, April 2004, 2005, and 2006, at Texas A&M University, a high-school State competition; prepared and administered the remote sensing exam

Seminars and presentations:

AGLS 101 (Modern Agricultural Systems and Renewable Natural Resources, April 2005), Summer Honors Invitational Program (SHIP 2005), Project GRAD (2005), COALS Aggieland Saturday (February 2005)

PROFESSIONAL AND HONOR SOCIETY MEMBERSHIP

American Society for Photogrammetry & Remote Sensing

Society of American Foresters (SAF)

Xi Sigma Pi, The Honor Society of Forestry

Sigma Si, The Scientific Research Society; Member of Awards Committee

I certify that the Curriculum Vitae is the most current and correct as of: June 28, 2006

Sorin C. Popescu