CURRICULUM VITAE

NAME: Luigi Boschetti   **DATE:** 01/01/2022

RANK OR TITLE: Professor

DEPARTMENT: Forest, Rangeland and Fire Sciences

OFFICE LOCATION AND CAMPUS ZIP: CNR 203E, MS 1133
OFFICE PHONE: 208-885-6508
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DATE OF FIRST EMPLOYMENT AT UI: August 2012

DATE OF PRESENT RANK OR TITLE: August 2018

EDUCATION BEYOND HIGH SCHOOL:

Degrees: (List most recent degree first: Degree, institution name, city, state, date, major or area of specialization.)
- PhD Geodesy and Geomatics (2005), Politecnico di Milano, cum laude
- BSc/MSc Environmental Engineering (2000), Politecnico di Milano (Milano, Italy).

Certificates and Licenses:
- Chartered Civil / Industrial / Electronic Engineer (Italy) since 2000.

EXPERIENCE:

Teaching, Extension and Research Appointments: (List position titles and locations since receipt of Bachelor's degree)

August 2018-	Professor, University of Idaho, Department of Natural Resources and Society (2018-2019) and Department of Forest, Rangeland and Fire Sciences (2019-)
August 2012- August 2018	Associate Professor, University of Idaho, Department of Forest Rangeland and Fire Sciences (2012-2015) and Department of Natural Resources and Society (2015-2018)
November 2009 – August 2012	Research Associate Professor, University of Maryland, Department of Geographical Sciences
July 2005 – November 2009	Assistant Research Scientist, University of Maryland, Department of Geography
April 2005 – July 2005	Faculty Research Assistant, University of Maryland, Department of Geography
April 2004 – April 2005	Research Fellow, Institute for the Electromagnetic Sensing of the Environment National Research Council (CNR-IREA), Milano, Italy
March 2002 – April 2004	Research Fellow, Institute for Environment and Sustainability (IES) Joint Research Centre (JRC) of the European Commission, Ispra, Italy
October 2000 – March 2002	Visiting Scientist, Natural Resource Institute (NRI), University of Greenwich Chatham Maritime, United Kingdom

TEACHING ACCOMPLISHMENTS: (Academic and Extension teaching)

Areas of Specialization:
Remote Sensing, Carbon Monitoring, Fire
Courses Taught: (title, course number, date(s))
University of Idaho:

2013-2021	Instructor, Introduction to Geospatial Analysis (FOR 375/ NRS 375)
2015, 2018, 2019	Instructor, Carbon, Climate, Forests (ISEM 301-20)
2014,2016, 2017, 2020	Instructor, Remote Sensing of Fire (FOR435/535)

University of Maryland:

2012 Instructor, "Italy: Land, Culture, Development", (winter term study abroad course, GEOG328G, ECON314, ANTH448O, HONR 328R)

2011 Instructor, "Remote Sensing for Carbon Stock Estimation" (GEOG 778)

2011 Instructor, "Italy: Land, Culture, Development", (winter term study abroad course GEOG328G, ECON314, ANTH448O, HONR 328R))

2010 Instructor, "Introduction to Remote Sensing" (GEOG 372)

2008 Instructor, "Remote Sensing and Digital Image Processing" (GEOG472)

2006 Co-instructor, "Introduction to Remote Sensing" (GEOG 372)

2006 Lectures on geolocation and burned area mapping, course "Advances in Remote Sensing of Terrestrial Global Change: Past Present & Future", (GEOG 778)

2005 Guest lecture on algorithms for mapping burned areas with MODIS data, University of Maryland, Department of Geography, course "Fire in the Global Environment", coordinated by Prof. Chris Justice

Politecnico di Milano

2000-2005 Guest lectures on global Earth Observation Systems, Global Landcover Mapping and Validation, Politecnico di Milano, School of Environmental Engineering, course of Remote Sensing coordinated by Prof. Giovanmaria Lechi.

2000-2001 Guest lectures on Remote Sensing for monitoring desertification and land degradation, Politecnico di Milano, School of Environmental Engineering, course of Environmental Impact Assessment coordinated by Prof. Giulio de Leo

European Social Fund Professional Master Courses

2004 Instructor of GIS and Remote Sensing (25 hours) at the European Social Fund Master course in Remote Sensing organized by Centro Camuno Studi Preistorici, Capodiponte, Brescia, Italy

2000 Instructor of Remote Sensing (40 hours) at the European Social Fund Master course in Remote Sensing, organized by CNR-Istituto di Ricerca sul Rischio Sismico and Parco Lombardo del Ticino, Milano, Italy.

Students Advised:

 Undergraduate Students: (number per year)

  202: 2 advisees

  2020: 2 advisees

  2019: 2 advisees

  2018: 2 advisees

  2017: 2 advisees

  2016: 6 advisees

  2015: 8 advisees

  2014: 8 advisees

  2013: 2 advisees

 Graduate Students:

  A) Major Professor

  Advised to completion of degree (student name, degree, and date)

  University of Idaho

  Erik Boren (Ph.D., Natural Resources), 2021

  Andrea Melchiorre (Ph.D, Natural Resources), 2020

  Maria Zubkova (PhD, Natural Resources), 2019

  Nuria Sanchez Lopez (Ph.D. Natural Resources), 2019

  Adam Young, (Ph.D. Environmental Sciences), 2018 co-advised with Prof. Phil Higuera (University of Montana)

  Erik Boren (M.S. Natural Resources - Thesis), 2015

  Luca Marini (M.S., Natural Resources), 2014

  Politecnico di Milano

  Elena De Angelis, M.S., MSc. Environmental Engineering, 2017, (Co-advised with Prof. Maria Brovelli)

Annamaria Kunzle, MSc. Environmental Engineering, 2005. (Co-advised with Dr. Pietro Alessandro Brivio and Dr. Luigi Mussio).
Università degli Study di Milano
Ilaria Palumbo, MSc., Environmental Sciences, 2003, Università degli Studi di Milano (Co-advised with Prof. Carlo Maria Marino and Dr. Jean Marie Gregoire).

Currently advising:

B)   Committee Member
Advised to completion of degree
Michael Humber, PhD, 2019, University of Maryland, Department of Geography, major professor: Prof. Chris Justice.
Carlos Alberto Silva, Ph.D. 2018, University of Idaho, major professor: Prof. Lee Vierling.
Danielle Berardi, MS, 2017, University of Idaho, major professor: Prof. Tara Hudiburg
Aaron Sparks, Ph.D, 2017, University of Idaho, major professors: Prof. Crystal Kolden – Prof. Alistair Smith.
Sanath Kumar, PhD, 2014, South Dakota State University, GIS Centre of Excellence. Main supervisor: Prof. David Roy.
Kelley O'Neal, PhD, 2014, University of Maryland, Department of Geography. Main supervisor: Prof. Chris Justice.
Jessica Mc Carthy, PhD., 2009, University of Maryland, Department of Geography. Main supervisor: Prof. Chris Justice.
Jose Roa, PhD., completed 2007, University of Maryland, Department of Geography, Main supervisor: Prof. Michael Kearney.
Stefano Testa, PhD, 2015, University of Turin, major professor: Prof. Enrico Borgogno Mondino

External examiner
Ramin Azar, PhD, 2015, Politecnico di Milano, major professor prof. Luigi Mussio
Roberto Luciani, PhD, 2017, Universita' di Roma La Sapienza, major professor prof. Giovanni Laneve

Currently advising

Materials Developed: (non-scholarship activity)

Courses Developed or Substantially Revised:
2015   "Climate, Carbon, Forests"
2013   "Remote Sensing of Fire" (FOR435/FOR535) for Spring 2014
2013   "Introduction to Geospatial Analysis" (FOR 375) for Fall 2013
2011   "Remote Sensing for Carbon Stock Estimation" (GEOG 778)
2006   "Introduction to Remote Sensing"(GEOG375)

Other material
2014/2017   Training material on GOFC-Gold Sourcebook on REDD+ (funded by the World Bank)

BOSCHETTI, Luigi

SCHOLARSHIP ACCOMPLISHMENTS: (Including scholarship of teaching and learning, artistic creativity, discovery, and application/integration)

Citation metrics:
    All citations: 6282, h-index: 41, i10-index: 77. Source: Google Scholar (01-21-2022)

Publications:

Peer Reviewed Journal Articles:
* indicates graduate student authors

1. Duncanson, L., Kellner, J.R., Armston, J., Dubayah, R., Minor, D.M., Hancock, S., Healey, S.P., Patterson, P.L., Saarela, et al.., 2022. Aboveground biomass density models for NASA's Global Ecosystem Dynamics Investigation (GEDI) lidar mission. Remote Sensing of Environment, 270, p.112845

2. Wooster, M.J., Roberts, G.J., Giglio, L., Roy, D.P., Freeborn, P.H., **Boschetti, L.,** Justice, C., Ichoku, C., Schroeder, W., Davies, D. and Smith, A.M., 2021. Satellite remote sensing of active fires: History and current status, applications and future requirements. *Remote Sensing of Environment*, *267*, p.112694.

3. Roy, D.P., Li, Z., Giglio, L., **Boschetti, L.,** Huang, H., 2021, Spectral and diurnal temporal suitability of GOES Advanced Baseline Imager (ABI) reflectance for burned area mapping, *International Journal of Applied Earth Observations and Geoinformation,* 96, 102271.

4. McCarley, T.R., Hudak, A.T., Sparks, A.M., Vaillant, N.M., Meddens, A.J., Trader, L., Mauro, F., Kreitler, J. and **Boschetti, L**., 2020. Estimating wildfire fuel consumption with multitemporal airborne laser scanning data and demonstrating linkage with MODIS-derived fire radiative energy. Remote Sensing of Environment, 251, p.112114.

5. Sanchez-Lopez, N., **Boschetti, L**., Hudak, A.T., Hancock, S. and Duncanson, L.I., 2020. Estimating Time Since the Last Stand-Replacing Disturbance (TSD) from Spaceborne Simulated GEDI Data: A Feasibility Study. Remote Sensing, 12(21), p.3506.

6. Boren, E.J. and **Boschetti, L.,** 2020. Landsat-8 and Sentinel-2 Canopy Water Content Estimation in Croplands through Radiative Transfer Model Inversion. Remote Sensing, 12(17), p.2803.

7. Prosperi, P., Bloise, M., Tubiello, F., Conchedda, G., Rossi, S**., Boschetti, L**., Salvatore, M., Bernoux, M.. 2020. New estimates of greenhouse gas emissions from biomass burning and peat fires, Climatic Change, http://dx.doi.org/10.1007/s10584-020-02654-0

8. Melchiorre, A.*, **Boschetti, L.** and Roy, D.P., 2020. Global Evaluation of the Suitability of MODIS-Terra Detected Cloud Cover as a Proxy for Landsat 7 Cloud Conditions. Remote Sensing, 12(2), p.202. https://doi.org/10.3390/rs12020202

9. Sanchez-Lopez, N.***, **Boschetti, L**., & Hudak, A., 2020, Reconstruction of the disturbance history of a temperate coniferous forest through stand-level analysis of airborne LiDAR data, *Forestry, https://doi.org/10.1093/forestry/cpz048*

10. Humber, M.***, **Boschetti., L**., Giglio, L., 2019, Assessing the shape accuracy of coarse resolution burned area identifications in the western United States, *IEEE TGRS, https://doi.org/10.1109/TGRS.2019.2943901.*

11. **Boschetti, L**., Roy, D.P., Giglio, L., Huang, H., Zubkova, M.***, Humber, M.L.***, 2019, Global validation of the Collection 6 MODIS burned area product, *Remote Sensing of Environment*, 235, 111490. https://doi.org/10.1016/j.rse.2019.111490

12. Roy, D., Huang., H., **Boschetti, L**., Giglio, L., Yan, L., Zhang, H. and Li, Z., 2019, Landsat-8 and

Sentinel-2 burned area mapping - a combined sensor multi-temporal change detection approach,. *Remote Sensing of Environment*, *231,* 111254. https://doi.org/10.1016/j.rse.2019.111254

13. Boren, E.*, **Boschetti L**., Johnson, D., 2019, Characterizing the Variability of the Structural Parameter in the PROSPECT Leaf Optical Properties Model, *Remote Sensing*, *11*(10), p.1236. https://doi.org/10.3390/rs11101236

14. Steady, W.D.*, Partelli Feltrin, R.*, Johnson, D.M., Sparks, A.M., Kolden, C., Talhelm, A.F., Lutz, J.A., **Boschetti, L**., Hudak, A.T., Nelson, A.S. and Smith, A., 2019. The Survival of Pinus ponderosa Saplings Subjected to Increasing Levels of Fire Behavior and Impacts on Post-Fire Growth. *Fire*, 2(2), p.23. https://doi.org/10.3390/fire2020023

15. Zubkova, M.*, **Boschetti, L**., Abatzoglou, J., and Giglio, L., 2019, Changes in Fire Activity in Africa from 2002 to 2016 and Their Potential Drivers, *Geophysical Research Letters* DOI:10.1029/2019GL083469

16. Huo, L., Boschetti, L. and Sparks, A., (2019) Object-based classification of forest disturbance types in the conterminous United States, *Remote Sensing*, 11(5), 477 https://doi.org/10.3390/rs11050477

17. Sanchez-Lopez, N.*, **Boschetti, L**., & Hudak, A. (2018). Semi-Automated Delineation of Stands in an Even-Age Dominated Forest: A LiDAR-GEOBIA Two-Stage Evaluation Strategy. *Remote Sensing*, *10*(10), 1622. https://doi.org/10.3390/rs10101622

18. Abatzoglou, J. T., Williams, A. P., **Boschetti, L.,** Zubkova, M.*, & Kolden, C. A. (2018). Global patterns of interannual climate–fire relationships. *Global change biology*, *24*(11), 5164-5175. https://doi.org/10.1111/gcb.14405

19. Giglio, L., **Boschetti, L**., Roy, D. P., Humber, M. L.*, & Justice, C. O. (2018). The Collection 6 MODIS burned area mapping algorithm and product. *Remote sensing of environment*, *217*, 72-85. https://doi.org/10.1016/j.rse.2018.08.005

20. Sparks, A. M.*, Kolden, C. A., Smith, A. M., Boschetti, L., Johnson, D. M., & Cochrane, M. A. (2018). Fire intensity impacts on post-fire temperate coniferous forest net primary productivity. *Biogeosciences*, *15*(4), 1173. https://doi.org/10.5194/bg-15-1173-2018

21. Sparks, A. M.*, Talhelm, A. F., Feltrin, R. P., Smith, A. M., Johnson, D. M., Kolden, C. A., & **Boschetti, L**. (2018). An experimental assessment of the impact of drought and fire on western larch injury, mortality and recovery. *International Journal of Wildland Fire*, *27*(7), 490-497. https://doi.org/10.1071/WF18044

22. Melchiorre, A.* and Boschetti., L., 2018, Global analysis of the burned area spectral signal persistence, Remote Sensing, 10(5), 750. https://doi.org/10.3390/rs10050750

23. Klauberg, C., Hudak, A. T., Bright, B. C., **Boschetti, L**., Dickinson, M. B., Kremens, R. L., & Silva, C. A. (2018). Use of ordinary kriging and Gaussian conditional simulation to interpolate airborne fire radiative energy density estimates. *International journal of wildland fire*, *27*(4), 228-240. https://doi.org/10.1071/WF17113

24. Humber, M. *, **Boschetti, L**., Giglio., L., Justice, C., 2018, Spatial and Temporal Intercomparison of Four Global Burned Area Products, International Journal of Digital Earth, DOI: 10.1080/17538947.2018.1433727.

25. Testa, S. *, Soudani, K., **Boschetti, L**., Borgogno Mondino E., (2018) MODIS-derived EVI, NDVI and WDRVI time series to estimate phenological metrics in French deciduous forests, International Journal of Applied Earth Observation and Geoinformation, vol. 64, 132-144. https://doi.org/10.1016/j.jag.2017.08.006

26. Huang, H., Roy, D. P., **Boschetti, L**., Zhang, H. K., Yan, L., Kumar, S. S., ... & Li, J. (2016). Separability analysis of sentinel-2A multi-spectral instrument (MSI) data for burned area discrimination. Remote Sensing, 8(10), 873. https://doi.org/10.3390/rs8100873

27. **Boschetti, L**., Stehman, S. V., & Roy, D. P. (2016). A stratified random sampling design in space and time for regional to global scale burned area product validation. Remote Sensing of Environment, 186, 465-478. https://doi.org/10.1016/j.rse.2016.09.016

28. Sparks, A. M.*, Kolden, C. A., Talhelm, A. F., Smith, A., Apostol, K. G., Johnson, D. M., & **Boschetti, L.** (2016). Spectral indices accurately quantify changes in seedling physiology following fire: towards mechanistic assessments of post-fire carbon cycling. Remote Sensing, 8(7), 572. https://doi.org/10.3390/rs8070572

29. Rossi, S., Tubiello, F., Prosperi, P., Salvatore, M., Jacobs, H., Biancalani, R. and **Boschetti, L.**, 2016, FAOSTAT estimates of greenhouse gas emissions from biomass and peat fires, *Climatic Change*, 1-13. http://dx.doi.org/10.1007/s10584-015-1584-y

30. Smith, A.M.S., Sparks, A.M. *, Kolden, C.A., Abatzoglou, J.T., Talhelm, A.F., Johnson, D.M., **Boschetti, L.**, Lutz, J.A., Apostol, K.,G., Yedinak, K.M., Tinkham, W.T. and Kremens, R.J, 2016, Toward a new paradigm in fire severity research using dose-response experiments, *International Journal of Wildland Fires*, 158-156. https://doi.org/10.1071/WF15130

31. Smith, A., Kolden, C., Paveglio, T., Cochrane, M., Bowman, D., Moritz., M., Kliskey, A., Alessa, L., Hudak, A., Hoffman, C., Lutz, J., Queen, L., Goetz, S., Higuera, P., **Boschetti, L.**, Flannigan, M., Yedinak, K., Watts, A., Strand, E., van Wagtendonk, J, Anderson, J, and Stocks, B., 2016, The Science of Firescapes: Achieving Fire Resilient Communities, *BioScience*, 66(2), 130-146. https://doi.org/10.1093/biosci/biv182

32. **Boschetti, L**., Roy, D. P., Justice, C. O., & Humber, M. L.* (2015). MODIS–Landsat fusion for large area 30m burned area mapping. Remote Sensing of Environment, 161, 27-42. https://doi.org/10.1016/j.rse.2015.01.022

33. Sparks, A.M.*, **Boschetti, L.**, Tinkham, W.T., Smith, A.M.S., and Lannom, K.O., 2014, An accuracy assessment of the MTBS burned area product for shrub-steppe fires in the northern Great Basin, United States, International Journal of Wildland Fire, 24, 70-78 https://doi.org/10.1071/WF14131

34. van Leeuwen, T. T., van der Werf, G. R., Hoffmann, A. A., Detmers, R. G., Rücker, G., French, N., Archibald, S., Carvalho Jr., J. A., Cook, G. D., de Groot, W. J., Hely, C., Kasischke, E. S., Kloster, S., McCarty, J. L., Pettinari, M. L., Savadogo, P., Alvarado, E. C**., Boschetti, L**., Manuri, S., Meyer, C. P., Siegert, F., Trollope, L. A., Trollope, W. S., 2014,. Biomass burning fuel consumption rates: a field measurement database, Biogeosciences Discussions, 11(6):8115-8180, doi: 10.5194/bgd-11-8115-2014.

35. Kumar, S.S.*, Roy, D.P., Cochrane, M.A., Souza JR, C.M., Barber, C., **Boschetti, L**., 2014, A quantitative study of the proximity of satellite detected active fires to roads and rivers in the Brazilian tropical moist forest biome, *International Journal of Wildland Fire.* 23(4):532-543, http://dx.doi.org/10.1071/wf13106

36. Smith, A.M.S., Kolden, K.A, Tinkham, W. T.*, Talhelm, A., Marshall, J., D., Hudak, A.T., Greenberg, J., Falkowski, M.J., Anderson, J. W., Kliskey, A., Alessa, L., **Boschetti, L**., Keefe, R.F. and Gosz, J.R., Remote Sensing the Vulnerability of Vegetation in Natural Terrestrial Ecosystem, 2014, *Remote Sensing of Environment*, 254:322-337. https://doi.org/10.1016/j.rse.2014.03.038

37. Baraldi, A., **Boschetti, L**., and Humber, M., 2014, Probability sampling protocol for thematic and spatial quality assessments of classification maps generated from spaceborne/airborne very high resolution images. *IEEE Transactions on Geoscience and Remote Sensing*, 51(1), pp 701-760.

38. Smith, A.M.S., Tinkham, W.T.*, Roy, D.P., **Boschetti, L**., Kremens, R.L., Kumar, S.S., Sparks, A., Falkowski, M.J., 2013, Quantification of fuel moisture effects on biomass consumed derived from fire

radiative energy retrievals, *Geophysical Research Letters*, 40, 6298–6302, doi:10.1002/2013GL058232.

39. Baraldi, A., **Boschetti, L**., and Humber, M., 2013, Quality Assessment of Pre-Classification Maps Generated from Spaceborne/Airborne Multi-Spectral Images by the Satellite Image Automatic Mapper (TM) and Atmospheric/Topographic Correction (TM)-Spectral Classification Software Products: Part 2-Experimental Results, *Remote Sensing*, 5(10), 5209-5264. http://dx.doi.org/10.1109/tgrs.2013.2243739

40. Clerici, N., Weissteiner, C.J., Paracchini, M.L., **Boschetti, L.**, and Baraldi, A., 2013, Pan-European distribution modelling of stream riparian zones based on multi-source Earth Observation data, *Ecological Indicators 24, 211-223. https://doi.org/10.1016/j.ecolind.2012.06.002*

41. Loboda, T.V., Giglio, L., **Boschetti, L.**, and Justice, C.O., 2012, Regional fire monitoring and characterization using global NASA MODIS fire products in dry lands of Central Asia, *Frontiers of Earth Science, 1-10.* https://doi.org/10.1007/s11707-012-0313-3

42. Baraldi, A. and **Boschetti, L.**, 2012, Operational Automatic Remote Sensing Image Understanding Systems: Beyond Geographic Object-Based and Object-Oriented Image Analysis (GEOBIA/GEOOIA). Part 1: Introduction, *Remote Sensing, 4 (9), 2694-2735.* https://doi.org/10.3390/rs4092694

43. Baraldi, A. and **Boschetti, L.**, 2012, Operational Automatic Remote Sensing Image Understanding Systems: Beyond Geographic Object-Based and Object-Oriented Image Analysis (GEOBIA/GEOOIA). Part 2: Novel system architecture, information/knowledge representation, algorithm design and implementation, *Remote Sensing, 4 (9), 2768-2817.* https://doi.org/10.3390/rs4092768

44. Stroppiana, D., Bordogna, G., Boschetti, M., Carrara, P., **Boschetti, L**, Brivio, P. A., 2012, A new method for extracting burned areas from Landsat TM images by soft aggregation of spectral indices and a region growing algorithm, *ISPRS Journal of Photogrammetry and Remote Sensing, 69, 88-102. https://doi.org/10.1016/j.isprsjprs.2012.03.001*

45. Bresciani M, Giardino C. and **Boschetti L.**, 2011, Evaluation of dynamics of bio-physical parameters in lake waters from MODIS and MERIS images, *Rivista italiana di Telerilevamento 43(3),49-62, http://dx.doi.org/10.5721/itjrs20114334*

46. Brivio, P.A. and Boschetti. L., 2011, Introduction to Special Issue "MODIS 2000-2010:Ten Years of Success in the Earth Observation", *Rivista italiana di Telerilevamento, 43(3), 3-5.*

47. Stroppiana, D., Bordogna, G., Boschetti, M., Carrara, P., **Boschetti, L**, Brivio, P. A., 2011, Positive and Negative Information for Assessing and Revising Scores of Burn Evidence , *IEEE Geoscience and Remote Sensing Letters, 10.1109/LGRS.2011.2167953.*

48. Kumar, S.*, Roy, D., **Boschetti, L**., Kremens, R., Exploiting the Power law Distribution Properties of Satellite Fire Radiative Power Retrievals - a Method to Estimate Fire Radiative Energy and Biomass Burned From Sparse Satellite Observations, 2011, *Journal of Geophysical Research-Atmospheres,* vol 166, D19303   DOI: 10.1029/2011JD015676

49. Pepe, M**., Boschetti, L.**, Brivio, P.A., Rampini,.A., 2010, Comparing the performance of fuzzy and crisp classifiers on remotely sensed images: a case of snow classification, *International Journal of Remote Sensing*, 31(23):6189-6203. https://doi.org/10.1080/01431160903401395

50. Archibald, S., Scholes, R., Roy, D., Wooster, M. and **Boschetti, L.**, 2010 Southern African fire regimes as revealed by remote Sensing, *International Journal of Wildland Fires*, 19:861-878, https://doi.org/10.1071/WF10008

51. **Boschetti L.**, Roy, D., Justice, C. and Giglio, L., 2010, Global assessment of the temporal reporting accuracy and precision of the MODIS burned area product, *International Journal of Wildland Fire, 19(6),* pp.705-709. *https://doi.org/10.1071/WF09138*

52. Roy, D., Boschetti, L., Maier, S. and Smith, A.M.S, 2010, Field estimation of ash and char colour-lightness using a standard grey scale, *International Journal of Wildland Fires,* 19(6), pp.698,704. *https://doi.org/10.1071/WF09133*

53. Petropolous, G, Knorr, W., Sholze, M., **Boschetti, L**. and Karantounias, G., 2010, Combining ASTER Multispectral Imagery Analysis and Support Vector Machines for Rapid and Cost-Effective Post-Fire Assessment: A case study from the Greek Wildland Fires of Year 2007, *Natural Hazards and Earth System Sciences*, vol 10, pp. 1-13. https://doi.org/10.5194/nhess-10-305-2010

54. **Boschetti, L.** and Roy, D, 2009, Strategies for the fusion of satellite fire radiative power with burned area data for fire radiative energy derivation, *Journal of Geophysical Research, Atmospheres*, vol.114, D20302, doi:10.1029/2008JD011645 .

55. Roy, D.P. and **Boschetti, L.**, 2009, Southern Africa Validation of the MODIS, L3JRC and GlobCarbon Burned Area Products, *IEEE transactions on Geoscience and Remote Sensing*, vol. 47(4), pp. 1032 – 1044, doi:10.1109/TGRS.2008.2009000.

56. Roy, D.P., **Boschetti, L.**, Justice, C.O. and Ju, J. 2008. The Collection 5 MODIS Burned Area Product - Global Evaluation by Comparison with the MODIS Active Fire Product, *Remote Sensing of Environment*, vol. 112, pp. 3690-3707. https://doi.org/10.1016/j.rse.2008.05.013

57. **Boschetti, L.** and Roy, D.P., 2008,Defining a fire year for reporting and analysis of global fire inter-annual variability, *Journal of Geophysical Research - Biogeosciences*, vol. 113, G03020, doi:10.1029/2008JG000686,

58. **Boschetti, L**., Roy, D. and Justice, C., 2008, Using NASA's World Wind Virtual Globe for Interactive Visualization of the Global MODIS Burned Area Product, *International Journal of Remote Sensing*, vol 29(11), pp.3067-3072. https://doi.org/10.1080/01431160701733023

59. **Boschetti, L**., Roy, D. Barbosa, P., Boca, R. and Justice, C., 2008, A MODIS assessment of the summer 2007 extent burned in Greece, *International Journal of Remote Sensing*, vol. 29, pp.2433-2436. https://doi.org/10.1080/01431160701874561

60. Boschetti, M., **Boschetti, L.**, Oliveri, S., and Casati, L., 2007, Tree species mapping with Airborne hyper-spectral MIVIS data: the Ticino Park study case, *International Journal of Remote Sensing*, vol 28(6), pp 1251-1261. https://doi.org/10.1080/01431160600928542

61. Roy, D., Lewis, P., Schaaf, C., Devadiga, S., **Boschetti, L**., 2006, The Global impact of cloud on the production of MODIS n-day and daily rolling n-day bi-directional reflectance model based composites for terrestrial monitoring , *IEEE Geoscience and Remote Sensing Letters*, vol. 3(4), pp 452 - 456, doi:10.1109/LGRS.2006.875433

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90. Grégoire J-M., K. Tansey, **L. Boschetti**, P.A. Brivio, D. Ershov, R. Fraser, D. Graetz, M. Maggi, P. Peduzzi, J.M.N. Pereira, J. Silva, A. Sousa, and D. Stroppiana, 2002, Global scale inventory of the area burnt in the year 2000.The GBA2000 dataset, *Land use and Land Cover Change (LUCC) Newsletter,* No. 8, pp. 13-14.

91. Raffo S., L. **Boschetti**, A. Baraldi, E. Binaghi, and J-M. Grégoire, 2002, Implementazione e test di un algoritmo, u*nsupervised change detection,* per l'individuazione di aree bruciate, *Proceedings 6ª Conferenza Nazionale ASITA Geomatica per l'ambiente, il territorio e il Patrimonio Culturale* , Vol.2, pp.1785-1790.

92. *Boschetti, L.*, Flasse, S., Trigg, S., Brivio, P.A., Maggi, M., 2001, A methodology for the validation of low resolution remotely sensed data products, *Proceeding of the 5a conferenza nazionale ASITA, Rimini 9-12 Ottobre 2001.*

93. **Boschetti, L.**, Brivio, P.A., and Grégoire, J.M., 2001, Detection of burned areas using geostationary satellite data in tropical environments, in *Remote Sensing for Agriculture, Ecosystems and Hydrology* (M. Owe, G. D'Urso, E. Zilioli, Eds.) Proc. SPIE Vol. 4171, pp. 156-165.

94. **Boschetti L.**, P.A. Brivio, and J-M. Grégoire, 2000, Metodologia per l'individuazione delle aree bruciate nella fascia tropicale del globo con dati di satelliti geostazionari. *Proceedings of the 4a Conferenza nazionale ASITA*; 3-6 October, 2000; Genova; Italy; vol.1., pp. 265-270.

Other: (reports, proceedings, papers, citations and references, performances)

WHITE PAPERS AND INTERNATIONAL REPORTS

1. **Boschetti, L.**, Justice, C., Roy, D, Csiszar, I, Chuvieco, E, Spessa A, Hoffman, A, Russell-Smith, J, Paganini M., Arino, O, 2014, Methods for estimating GHG emissions from biomass burning, in "A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas

emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation", GOFC-GOLD. http://www.gofcgold.wur.nl/redd/

2. Chris Justice, Ivan Csiszar , **Luigi Boschetti**, Stefania Korontzi, Wilfrid Schroeder, Louis Giglio and David Roy, Satellite Monitoring and Inventory of Global Vegetation Fire, in *White Paper on Vegetation Fires and Global Change* (Goldammer Ed.), presented at the "Global Platform for Disaster Risk Reduction" workshop at the UN, Geneva, 15-19 June 2009, as the contribution of the UNISDR Wildland Fire Advisory Group to the United Nations system.

3. **Boschetti**, L., Roy D**.,** Justice, C., 2009, International Global Burned Area Satellite Product Validation Protocol Part I – production and standardization of validation reference data. Available online on http://lpvs.gsfc.nasa.gov/

4. Justice, C., Giglio, L., Csiszar, I., **Boschetti, L.**, Korontzi, S. and Wooster, M., *White Paper on a NASA Fire ESDR*, available online (last accessed September 30 2009) at: http://landportal.gsfc.nasa.gov/Documents/ESDR/Fire_Justice_whitepaper.pdf

Presentations and Other Creative Activities: (i.e. slide sets, web pages, video productions, etc., provide date and location)

Since 2012:

1. Sánchez-López, N., Hudak A.T., Boschetti L., Silva C.A., Bright B.C., Loudermilk E.L. (2021, November). A spatially explicit tree crown-based approach to estimate litter surface fuels in fire-maintained pine forests in the Southeastern US. 9th International Fire Ecology and Management Congress.
2. Boschetti, L., Roy, D.P. and Sparks, A., National and sub-national burned area assessment information for fire activity reporting and carbon inventories from the internet based Global Wildfire Information System (GWIS), 11th Southern African Fire Network (SAFNet) meeting, July 28-29 2021.
3. Roy, D.P., Huang, H., Martins, V., Boschetti, L., Africa burned area product generation and validation with Landsat-8, Sentinel-2 and commercial Planetscope imagery, 11th Southern African Fire Network (SAFNet) meeting, July 28-29 2021.
4. Boschetti, L., Sparks, A., and Roy, D., Satellite Earth Observation and Natural Hazards: the case of wildfires, 25th International Humanitarian and Security Conference, Geneva (CH), October 1-2 2020 (invited)
5. Boschetti, L., Roy, D., Giglio, L., Zubkova.,M., Sparks, A., Humber, M., Global Fire Monitorning from Space (the use and misuse of satellite fire products), invited presentation, University of Idaho, Department of Forest, Rangeland and Fire Sciences, February 18th 2020
6. Giglio, L., Boschetti, L, Roy, D, Humber, M., Justice, C., Status of MODIS and VIIRS Burned Area Products, NASA MODIS and VIIRS Science Team, College Park, MD, November 19-21.
7. Giglio, L., Boschetti, L, Roy, D, Humber, M., Hall, J., Justice, C., NASA MODIS and VIIRS Burned Area Product Update, GOFC-GOLD Fire IT and GWIS Meeting, Rome October 1-2 2019.
8. Roy, D., Huang., H., Boschetti, L., Giglio, L., Yan, L., Zhang, H. and Li, Z., Landsat & Sentinel Burned Area Updates, GOFC-GOLD Fire IT and GWIS Meeting, Rome October 1-2 2019
9. Boschetti, L., Sparks, A., Roy, D., Using NASA fires products to enhance GWIS, GOFC-GOLD Fire IT and GWIS Meeting, Rome October 1-2 2019.
10. Roy, D., Huang., H., Boschetti, L., Yan, L., Zhang, H. and Li, Z., Progress on Moving Multi-Source Land Imaging of Africa Burned Area to Production (Type 1), NASA LCLUC Science Team Meeting, Gaithersburg (MD) 3-4 April 2019
11. Roy, D., Huang., H., Boschetti, L., Yan, L., Zhang, H. and Li, Z., Moving from Prototyping a Landsat-8 Sentinel-2 global burned area product (Type II) to Production (Type 1), NASA LCLUC Science Team Meeting, Gaithersburg (MD) 3-4 April 2018
12. Boschetti, L., Giglio L., Roy, D., Justice, C., The Collection 6 MODIS Burned Area Mapping Algorithm and Product, 10th Southern African Fire Network (SAFNet) Meeting, Kruger National Park, 15.-19. April 2018.

13. Roy, D., Huang., H., Boschetti, L., Giglio, L., Yan, L., Zhang, H. and Li, Z., Landsat-8 and Sentinel-2 burned area mapping, 10th Southern African Fire Network (SAFNet) Meeting, Kruger National Park, 15.-19. April 2018

14. Boschetti L., Roy, D., Sparks, A., Using the NASA fire products enhance the Global Wildfire Information System (GWIS), GOFC Fire Implementation Team, College Park, October 1-2 2018

15. Giglio, L., Boschetti.,L, Roy, D., Humber, M., Justice C., NASA MODIS & VIIRS BA Products Update, GOFC Fire Implementation Team, College Park, October 1-2 2018

16. Roy, D., Huang., H., Boschetti, L., Giglio, L., Yan, L., Zhang, H. and Li, Z. Landsat & Sentinel Burned Area Updates, GOFC Fire Implementation Team, College Park, October 1-2 2018.

17. Roy, D., Huang., H., Boschetti, L., Yan, L., Zhang, H. and Li, Z., Current algorithms and systems to map fire severity at landscape scale, Savannah Burning, Fire Severity Mapping Workshop, Darwin 29-30th November 2018

18. Boschetti., L., Calibration and Validation of Burned Area Products (GOFC Fire IT, Windsor, UK, November 20-22 2017)

19. Giglio, L., Boschetti L, Roy D, NASA MODIS and VIIRS BA products update (GOFC Fire IT, Windsor, UK, November 20-22 2017)

20. Roy., D., Huang., H., Zhang., H., Yan, L., Boschetti., L., Landsat & Sentinel Burned Area Updates (GOFC Fire IT, Windsor, UK, November 20-22 2017)

21. Boschetti., L., Roy, D., Using NASA fires product to enhance GWIS - Boschetti/Roy (GOFC Fire IT, Windsor, UK, November 20-22 2017)

22. Boschetti., L., Roy, D., Using NASA fires product to enhance GWIS - Boschetti/Roy (NASA Applied Sciences GWIS Side Event, GEO Plenary, Washington DC October 23rd 2017)

23. Boschetti, L., Validation of global burned area products for emissions and fire regime estimation, Spring 2017 meeting of the Tactical Fire Remote Sensing Advisory Committee (NASA/USFS), NASA Ames research center, May 21, 2017.

24. Boschetti L., Spatial and Temporal Sampling for the validation of global burned area products, South Dakota State University, February 2nd, 2017 **(invited seminar)**

25. Boschetti L, Challenges for Burned area and Active Fire Validation, GOFC-Fire Implementation Team Meeting, Santiago (Chile), November 15-16 2016

26. Boschetti L., Stehman, S, Roy, D, Global Burned Area Validation: Spatial and Temporal Sampling, GOFC-Fire Implementation Team Meeting, Santiago (Chile), November 15-16 2016

27. Boschetti, L., Roy, D., Stehman, S., A stratified random sampling design in space and time for regional to global scale burned area product validation, European Space Agency Living Planet Symposium, Prague May 2016

28. Roy, D., Huang, H., Kumar, S., Zhang, H., Li, J., Gomez-Dans, J., Lewis, P., Boschetti, L., Early results prototyping a global Landsat-8 Sentinel-2 burned area product, European Space Agency Living Planet Symposium, Prague May 2016

29. Boschetti, L., Roy, D. and Stehman, S., Stratified Sampling in Time and Space for global burned area validation, Sentinel-3 User Symposium, Venice (Italy), June 2-5 2015.

30. Giglio L., Boschetti, L., MODIS Fire and Burned Area and Validation Update , GOFC Fire IT meeting, July 29th – August 1st 2014, NOAA NCWCP, MD (invitation only workshop)

31. Boschetti, L., Hoffman, A., UN-REDD Fire-GOFC source book updates and next steps, GOFC Fire IT meeting,July 29th – August 1st 2014, NOAA NCWCP, MD (invitation only workshop)

32. Giglio L., Schroeder, W., Boschetti, L., Roy, D., Justice, C., Collection 6 Fire Products, NASA MODIS Science Team Meeting, April 29-30 2014, Columbia, MD **(invited presentation)**

33. Boschetti, L., Roy, D., Humber, M., MODIS-Landsat data fusion for automated continental 30 m burned area mapping, NASA MODIS Science Team Meeting, April 29-30, Columbia, MD (poster)

34. Boschetti L., Keefe, R., Smith., A., Hudak., A, Prototyping global industrial forest mapping, a Landsat spatio-temporal approach", NASA Land-Cover Land-Use Change Science Team Meeting, April 23-25, Rockville, Maryland (poster).

35. Boschetti, L., Tansey, K., Validation Status of the International Fire Satellite Products, CEOS LPV subgroup meeting, 30-31 January, European Space Agency, Frascati 30-31 January 2014 (Invitation only workshop)

36. Boschetti, L., Tansey, K., Status of the International Fire Satellite Products, CEOS LPV subgroup meeting, 30-31 January, European Space Agency, Frascati 30-31 January 2014 (Invitation only workshop)

37. Boschetti, L., Roy,D., Stehman, S., Justice., C., Design-Based Validation of the MODIS Global

Burned Area Product., Land Product Validation and Evolution, European Space Agency, Frascati, Rome 28-30 January 2014

38. Schaepman-Strub, G., Román, M., Boschetti, L., Che, T., Dash, J., Fernandes, R., Gobron, N., Hall, D., Herold, M., Hook,S., Jackson, T., Jones, M., Nickeson, J., Olofsson, P., Plummer, S., Sanchez, A., Schaaf, C., Sobrino, J., Tansey, K., Wagner, W., Coordinating Validation of Satellite-Derived Land Surface Products – Mission and Achievements of the CEOS LPV, Land Product Validation and Evolution, European Space Agency, Frascati, Rome 28-30 January 2014, **Invited Keynote**.

39. Roy, D.P., Kovalskyy, V., Yan, L., Egorov, A., Kommareddy, I., Zhang, H., Hansen, M., Boschetti, L., Votava, P., Nemani, R., Web-Enabled Landsat Data (WELD) for monitoring contemporary terrestrial change nearly everywhere, Frontiers in Earth Observation for Land System Science - a joint workshop of the EARSeL SIG LULC and the NASA LCLUC Science Team, Humboldt-Universität, Berlin, Germany, 17-18 March, 2014, **Invited Keynote**.

40. Boscehtti L., Fire and REDD+, King's College London, UK, October 18th 2013 (**Invited Seminar**)

41. Boschetti,L, Roy, D., Justice C., Giglio, L., Building a global fire climate record: The challenge of meeting the Essential Climate Variable requirements, 9th Earsel Fire SIG, Coventry 16 October 2013 (**Invited Keynote**)

42. Boschetti,L, Roy, D., Justice C., Giglio, L., Burned Area and Validation – next steps GOFC Symposium, Wageningen, NL, 15 April 2013

43. Boschetti, L., Hoffman, A., UN-REDD Fire-GOFC source book updates and next steps, GOFC Symposium, Wageningen, NL, 17 April 2013

44. Boschetti.L., Roy, D., Baraldi A., Justice C., systematic burned area mapping with Landsat in the context of emission estimation, invited presentation at the Workshop "Burn Severity and related ecosystem responses" organized by the Brazilian Ministry for Environment , Brasilia Dec 11-14

45. Boschetti.L., Roy, D., Baraldi A., Justice C., MODIS-Landsat Data Fusion for Continental Scale 30m Resolution Burned Area Mapping, invited presentation at the *Sentinel-3 OLCI & MERIS ATSR ESA workshop*, Frascati, Italy, 15-19 October 2013

46. Boschetti.L., Roy, D., Justice C., Giglio, L., "Global Burned Area Mapping: MODIS and beyond", Invited presentation at the NASA Science Meeting, GOFC-GOLD and NEESPI Workshop and Regional Conference Impacts of extreme weather on natural, socio-economic, and land-use systems: Focus on the 2010 summer anomaly in the Volga region June 17 – 22, 2012 Volga State University of Technology, Yoshkar-Ola, Mari El, Russian Federation

47. Boschetti L., Roy, D., Justice C., Giglio, L., Davies, D., "MODIS RapidFire and Burned Area analysis – An operational Success Story", invited presentation at the 2012 NASA Modis Science Team Meeting, Silver Spring May 7-9 2012

Grants and Contracts Awarded: (provide principal and co investigators, title, sponsor, funding dates, amount)

Total external funding awarded: $12.7 M ($2.6 M as PI, $10.1 M as Co-I)

Active grants

Project/Proposal Title: *Is the world burning less? Disentangling decadal trends, inter-annual fire variability and product uncertainties, through harmonization of the NASA MODIS and VIIRS fire product record.*
PI: Dr. Luigi Boschetti (University of Idaho), Co-Is: Dr. David Roy (Michigan State University) Louis Giglio (University of Maryland)
Source of Support: NASA solicitation NNH20ZDA001N-TASNPP.
Proposed performance period: September 1st 2021 – August 31st 2024
Total award: $664,543

Project/Proposal Title: *Support and Maintenance of S-NPP and JPSS VIIRS Global Active Fire and Burned Area Earth System Data Records.*

PI: Louis Giglio (University of Maryland) Co-Is: Dr. Mike Humber, Dr. Johanne Hall, Dr. Maria Zubkova (University of Maryland), Dr. Luigi Boschetti (University of Idaho), Dr. David Roy (Michigan State University)
Source of Support: NASA solicitation. NNH20ZDA001N-SNPPSP
Proposed performance period: September 1st 2021 – August 31st 2024
Total award: **$789,838**

Project/Proposal Title: *Where are the missing burned areas? Global hotspots of burned area – a multiresolution analysis.*
PI: Dr. David Roy (Michigan State University) CO-I: Dr. Luigi Boschetti (University of Idaho), Hayian Huang (South Dakota State University), Louis Giglio (University of Maryland)
Source of Support: NASA solicitation NNH17ZDA001N-LCLUCLand-Cover/Land-Use Change Multi-Source Land Imaging.
Proposed performance period: December 1st 2020 – December 1st 2023
Total award: **$765,103**

Project/Proposal Title: *Africa burned area product generation, quality assessment and validation – demonstrating a Multi-Source Land Imaging (MuSLI) Landsat-8 Sentinel-2 capability*
PI: Dr. David Roy (SDSU GSCE) CO-I: Dr. Luigi Boschetti (University of Idaho), Hayian Huang (South Dakota State University)
Source of Support: NASA solicitation NNH17ZDA001N-LCLUCLand-Cover/Land-Use Change Multi-Source Land Imaging.
Proposed performance period: August 15th 2018 – August 15th 2023
Total award: **$1,102,045**

Project/Proposal Title: *Object-based aggregation of fuel structures, physics-based fire behavior and self-organizing smoke plumes for improved fuel, fire, and smoke management on military lands*
PI: Dr. Andrew T. Hudak, USFS-Rocky Mountain Research Station, Moscow, ID
Co-Is: : Boschetti, L. (University of Idaho PI), Prichard, S. (University of Washington), French, N. (Michigan Tech), Hoffman, C., (Colorado State University), Kockanski, A. (University of Utah), Clements, C. (San Jose State University), Kremens R. (Rochester Institute of Technology), Hiers K. (Tall Timbers), Ball T. (FireBall Inc.)
Source of Support: US Department of Defense SERDP
Performance Period: May 2020 – April 2025
Total award: $2,499,488

Past grants

Project/Proposal Title: *Using the NASA polar orbiting fire product record to enhance and expand the Global Wildfire Information System (GWIS)*
PI: Dr. Luigi Boschetti (University Idaho), CO-I: Dr. David Roy (SDSU GSCE),
Source of Support: NASA solicitation NNH16ZDA001N-GEO *Group on Earth Observation Work Programme* Element 3.8: Global Wildfire Information System
Proposed performance period: February 1st 2018 – January 31st 2022
Total award: **$535,996**

Project/Proposal Title: *Development of a Suomi NPP VIIRS Global Burned Area Earth System Data Record*

PI: Dr. Louis Giglio, University of Maryland, College Park, MD, USA
Co-Is: Boschetti, L. (University of Idaho), Roy, D.P. (South Dakota State University),
Source of Support: NASA ROSES 2017, "Terra and Aqua – Algorithms – Existing Data Products" (NNH17ZDA001N-TASNPP)
Performance Period: July 2018 – July 2021
Total award: $100,000

July 2014 to June 2018 "*MODIS global active fire and burned area product maintenance and validation*" PI: Dr. Louis Giglio (University of Maryland) CO-Is: Boschetti, L. (University of Idaho), Schroder, W. (University of Maryland), Roy, D.P. (SDSU), Justice, C. (University of Maryland), Csiszar, I. (NOAA) Source of Support: *NNH13ZDA001N-TERAQEA Terra and Aqua – Algorithms – Existing Data Products.* ($397,786)

April 2014 – April 2018. " *Prototyping global industrial forest mapping, a Landsat spatio-temporal approach*" PI: Dr. Luigi Boschetti, University of Idaho, Moscow, ID, USA Co-Is: Robert Keefe (University of Idaho), Alistair Smith (University of Idaho), Andrew Hudak (US Forest Service) Source of Support: *NASA ROSES 2012, NNH12ZDA001N-LCLUC: Land Cover/Land Use Change* ($722,333)

September 2014 – August 2018 "Development of a Suomi NPP VIIRS Global Burned Area Earth System Data Record*"* PI: Dr. Louis Giglio, University of Maryland, College Park, MD, USA Co-Is: Boschetti, L. (University of Idaho), Roy, D.P. (South Dakota State University), Vadrevu, K. (University of Maryland), Source of Support**:** NASA ROSES 2013, "Terra and Aqua – Algorithms – Existing Data Products" (NNH13ZDA001N-TERAQEA) **(**$542,422)

July 2015 to June 2018 "*Prototyping a Landsat-8 Sentinel-2 global burned area product"* PI: Dr. David Roy (SDSU GSCE) CO-Is: Valeriy Kovalskyy, Luigi Boschetti Source of Support: *NASA NNH14ZDA001N-LCLUC, LAND-COVER/LAND-USE CHANGE: MULTI-SOURCE LAND IMAGING SCIENCE* ($694,525)

September 1st 2016 – February 28th 2020 "*Satellite Constellation Requirements for 30m global burned area mapping"* PI: Dr. Luigi Boschetti (University Idaho), Graduate Student: Andrea Melchiorre (University of Idaho) Source of Support: NASA solicitation NESSF16 NASA Earth and Space Science Fellowship 2017 ($80,000)

September 2016-August 2017 " Impact of climate and Vegetation on Historical and Future Fire Activity in Boreal Forest and Arctic Tundra Ecosystems" NASA Earth And Space Science Fellowship 2016 (Renewal); PI: Luigi Boschetti, graduate student: Adam Young ($35000)

November 2016: "Short Term Mobility" award for exchanges between personnel of Italian and Foreign research institution, funded by the Italian National Research Council (3000 EUR)

January 2015 - September2015, "National Forest Monitoring Systems for a transparent and truthful REDD+", **Boschetti L.** (Principal Investigator), Source of Support: UN FAO (61,000USD)

January 2011-December 2015 "Sentinel 3 Science Products: a US contribution". Justice C.O. (Principal Investigator), **Boschetti, L**. (Co- Principal Investigator), Giglio, L. (Co- Principal Investigator), Vermote E. (Co- Principal Investigator). Source of Support: NASA ROSES 2010 (464,117 USD)

January 2014 - September2014, "National Forest Monitoring Systems for a transparent and truthful REDD+", **Boschetti L.** (Principal Investigator), Source of Support: UN FAO (79,558USD)

January 2011-August 2014 "MODIS-Landsat data fusion for high spatial resolution multiannual wall to wall burned area mapping of the Conterminous United States", **Boschetti, L**. (Principal Investigator), Roy, D. (Co-Principal Investigator), Source of Support: NASA ROSES 2009 (278,710 USD, UI 111,056 USD)

January 2011-February 2015 "MODIS Burned Area Maintenance, Improvement and Validation", Justice C.O. (Principal Investigator), **Boschetti, L**. (Co- Principal Investigator), Roy, D. (Co-Principal Investigator), Giglio, L. (Co- Principal Investigator) Source of Support: NASA ROSES 2009 (789,598 USD, UI 102,791USD)

April 2011-October 2014, "Land Cover Land Use Change Scientist Program Support." Justice C. (Principal Investigator), **Boschetti L.** (Co-Principal Investigator), Vadrevu K. (Co-Principal Investigator) Source of support: NASA (918,470 USD)

September 2010: "Short Term Mobility" award for exchanges between personnel of Italian and Foreign research institution, funded by the Italian National Research Council (2,400 EUR)

August 2009 - August 2010: Reconciliation between the MODIS Active Fires and Burned Area Products for Improved Biomass Burned and Uncertainty Estimation. **Boschetti, L**. (Principal Investigator), Roy, D. (Co- Principal Investigator) and Smith A.M. (Co- Principal Investigator). Source of support: NASA Earth Science Applications Feasibility Studies. (91,855 USD)

July 2008: "Short Term Mobility" award for exchanges between personnel of Italian and Foreign research institution, funded by the Italian National Research Council (1,600 EUR)

December 2007 – December 2010: A Global Burned Area ESDR, Justice, C. O. (Principal Investigator), **Boschetti, L**. (Co- Principal Investigator), Roy, D. (Co- Principal Investigator), Giglio, L. (Co-Principal Investigator). Source of Support: NASA Earth System Science Research using Data and Products from the Terra, Aqua, and ACRIMSAT Satellites, (1,067,586 USD)

July 2006: "Short Term Mobility" award for exchanges between personnel of Italian and Foreign research institution, funded by the Italian National Research Council (1,600 EUR)

March 2002-April 2004: "Training through Research" grant by the European Commission, covering a Research Fellowship at the Joint Research Centre (60,000 EUR)

October 2001-February 2002: Grant for research in a foreign university, funded by Italian National Research Council (7,000 EUR)

October 2000-October 2001: Grant for research in a foreign university, funded by Politecnico di Milano (13,000 EUR)

Honors and Awards:
2015 Outstanding Continuing Education and Service Award, College of Natural Resources, University of Idaho

SERVICE:

Major Committee Assignments: (National, State, District, County, University, College, Departmental and dates)
International Committes and Working Groups
GOFC-GOLD Fire Implementation Team (2009-present)
CEOS Cal/Val, Working group on Fire validation, **co-chair** (2008-present)
CEOS Cal/Val Working Group on Global Land ProductsValidation (2003-present)
European Commission
JRC Institute for Environment and Sustainability Scientific Committee (2003)

National Committees
Tactical Fire Remote Sensing Advisory Committee**,** USFS-NASA, (2017-present)
Italian Ministry for Environment and National Research Council, Scientific Committee of the 'Monitoring Fire in Protected Areas' project (2005-2008)

Campus, College and Departmental Committees (University of Idaho)

VPR Research Computing Task Force (2019-)
Borah Committee (2017-2020)
Faculty Senate (2014-2017)
Vandal Loan Committee (2016-2018)
NKN advisory board (2016-2017)
CNR graduate council (2016-present)
CNR geospatial committee (2012-present, **chair)**
Campus IT committee (2013-2016)
Graduate Council (2013-2014, alternate CNR representative)
International Engagement Council (2013-2016)
Department of Forest, Rangeland and Fire Sciences, Graduate Committee (2013)

Search committees:
Department of geography, Search Committee for GIS assistant professor (2014, external member)
Department of Forest, Rangeland and Fire Sciences, Search Committee for Range Ecology and Management Assistant Professor (2014, **chair**)
Department of Natural Resources and Society, Search Committee for Water Resources Management Assistant Professor (2017)
Department of Forest, Rangeland and Fire Sciences, Search Committee for Range Ecology and Management Heady Endowed Professor (2017, external member)
Department of Natural Resources and Society, Search Committee for Remote Sensing Assistant Research Professor (2017)

Departmental Committees (University of Maryland, Department of Geography)

Research Faculty Advisory Committee (2010, **chair)**
Research Faculty voting representative in the Faculty Committee (2008-2012)
Graduate Committee (2006-2008)
Research Committee (2005-2006)
Research Faculty Merit Review Committee (2006, 2008)

Professional and Scholarly Organizations (including memberships, committee assignments, editorial services, offices held and dates)

Editorial Services
Member of the Editorial Board of the peer reviewed journals "*Fire*" and "*Remote Sensing*", published by MDPI, 2017-present
Remote Sensing, guest editor of the special issue dedicated to the 10th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Limassol (Cyprus) November 2015.
European Journal of Remote Sensing, guest editor of the special issue dedicated to the 10th anniversary of the MODIS mission, 2010.

Scientific Conference Organization and Service
Chair, "Forest fire detection and monitoring on multiple scales" session, 12th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Rome (IT) October 2019
Chair, "Forest fire detection and monitoring on multiple scales" session, 11th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Chania (GR) September 2017
Member of Scientific committee, 11th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Chania (GR) September 2017.
Member of Scientific committee, 9th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Leicester (UK) October 2017.
Co-Convener, Fire Session, EGU Symposium, Vienna, Austria, April 2012
Chair, Burned Area Mapping Session, NASA LCLUC-NEESPI Workshop, Yoshkar-Ola, Russian Federation, June 2012.
Chair, Space Assets Session, 1st workshop on Remote Sensing for Sub-Saharan Africa, Nairobi,

Kenya, November 2011
Chair, Special session on the 10th Anniversary of the MODIS mission, Italian Remote Sensing Conference (ASITA) Brescia, IT, 2010
Chair, Fire Validation Session, EARSEL-SIG FIRE workshop, Matera, Italy, September 2009
Member of Scientific committee, 6th International Workshop of the EARSeL Special Interest Group (SIG) on Forest Fires, Thessaloniki (Greece) September 2007.
Co-Chair Fire and Hazards session, Geoscience and Remote Sensing Symposium, 2004. IGARSS '06, Denver, USA, 31 July-5 August 2006.

Funding Agency Peer Review Service
NASA, *Peer Review Panelist* (2010, 2011, 2012, 2017)
Foundation for Polish Science, *reviewer* (2013)
Copernicus Global Land Service reviewer, European Commission (2017-2020)

Society Membership
American Geophysical Union, member, 2010-present

Outreach Service: (Including popular press, interview articles, newspaper articles, workshops-seminars-tours organized, Extension impact statements)
- GOFC-GOLD REDD Sourcebook, member of the Core EditorialTeam (2009-present); the sourcebook provides guidance for the use of satellite dataset for carbon accounting (http://www.gofcgold.wur.nl/redd/) a new version of the material is presented every year at the Conference Of Parties (COP) of the UN Framework Convention on Climate Change (UNFCC)
- UN-FAO Open Foris Initiative: as part of my collaboration with FAO on the development of open source tools for carbon accounting of biomass burning, UI is one of the contributors of the Open Foris Initiative (http://www.openforis.org/partnership.html)
- participation in the FAO-IPCC-IFAD expert meeting on greenhouse gas inventory guidelines for agriculture and land use, Rome, 13-14 November 2014 (http://www.fao.org/economic/ess/ess-events/fao-ipcc-ifad/en/)

Contacts with popular press and media
AGU GeoSpace, June 27th 2019 (https://blogs.agu.org/geospace/2019/06/27/study-finds-increased-moisture-facilitated-decline-in-african-fires-in-africa/)
Washington Post, July 19th 2017 (http://wapo.st/2yD8kPT)
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