

**ROGER Jean-Claude**

Research Professor

**University of Maryland College Park**

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Date of Birth: January 6<sup>th</sup>, 1964**EDUCATION**

- Dec 2006      **HDR** (*Habilitation to Direct Researches - step beyond a PhD in France*), “Synergetic approach for a better optical and micro-physical characterization of aerosols, and a better estimation of their impacts”, defended and passed December 13<sup>th</sup>, 2006, University Blaise Pascal, France
- Sep 1988 - Dec 1991      **Ph.D from the University of Lille 1**, Dissertation title: "Spatial Studies in Polarized Light - Preparation of the POLDER instrument"- Graduated with the highest honors, July 22, 1991
- Sep 1987 – Aug 1988      **Enhanced Studies Degree** (*step between M.S. and Ph.D. at that time in France*) in "Physic of Matter and Radiation" - University of Lille 1, France
- Sep 1986 – Aug 1987      **M.S.** in *Fundamental Physics* - University of Lille 1, France

**APPOINTMENTS**

- May 2016 - present      **Research Professor** at the University of Maryland
- May 2014 – Apr 2016      **Visiting Research Professor** at the University of Maryland
- Sep 2007 - present      **Full Professor** at the University Blaise Pascal, France
- Feb 2007 – Apr 2010      **Chair**, Department of Physics (115 people), University Blaise Pascal, France
- Sep 2006 – Aug 2007      **Associate Physicist** at the Clermont Observatory of Terrestrial Physics, University Blaise Pascal, France
- Jul 2005 – Jun 2006      **Associate Research Scientist** at the University of Maryland and the NASA Goddard Space Flight Center, Greenbelt, Maryland
- Sep 2003 – Aug 2004      **Researcher** at the French National Center of the Scientific Researching (CNRS), France
- Sep 1995 – Aug 2006      **Assistant Professor** at the University of Littoral Côte d’Opale, France

- Nov 1992 – Aug 1995 **Assistant Research Scientist** at the University of Maryland (USA) and at the Biospheric Science Branch, NASA Goddard Space Flight Center, Greenbelt, Maryland.
- Sep 1991 – Oct 1992 **Post-Doctorate** for the French National Center for Space Studies (CNES), France
- Sep 1988 – Aug 1991 **Temporary Teaching and Research Position** at the University of Lille 1, France

## SERVICE and OUTREACH

### Research

- 2018-2020 **Co-PI of the Project** “CEOS-WGCV Atmospheric Correction Inter-Comparison eXercise” (ACIX-2) – a NASA/ESA cooperative project
- 2018-2020 **Co-I of the Project** “CEOS-WGCV Cloud Mask Inter-comparison eXercise” (CMIX) – a NASA/ESA cooperative project
- 2018-present **PI of the Website** of our team S.A.L.S.A. with E. Murphy: <http://salsa.umd.edu/>
- 2015-2018 **Co-PI of the Project** “CEOS-WGCV Atmospheric Correction Inter-Comparison eXercise” (ACIX) – a NASA/ESA cooperative project
- 2015-present **PI for the Memorandum of Understanding (MOU)** with the University of Ouagadougou (Burkina Faso)
- 2015-present **Co-Manager of the UMD SALSA team** (involving 9 people)
- 2014-present **Co-PI of the 6SV algorithm** (Second Simulation of a Satellite Signal in the Solar Spectrum – Vector)
- 2015-present **Authorship and maintenance** of the “NASA-MODIS Surface Reflectance Collection 6” User’s Guide.
- 2015-present **Authorship and maintenance** of the “NASA-VIIRS Surface Reflectance” User’s Guide.
- 2015 **Authorship** of the “NASA-VIIRS Surface Reflectance” ATBD
- 2017 **Authorship** of the “NOAA-VIIRS Surface Reflectance” ATBD
- 2018-present **Co-Authorship** of the “Harmonized Landsat-8 Sentinel-2 (HLS) Product” User’s Guide.

### Panel review of projects (major ones)

- 2020 **Member of the Panel Review** for NGA (National Geo-intelligence Agency), USA
- 2020 **Member of the Panel Review** for ANRT (National Agency of Scientific and Technologic Research), France
- 2020 **Member of the Panel Review** for CONICYT (National Council of Scientific and Technologic Research), Chile
- 2014-2018 **Member of the Panel Review** for CONICYT (National Council of Scientific and Technologic Research), Chile
- 2015 **Member of the Panel Review for the Research Department of the "Nord – Pas de Calais" State**, France
- 2013-2014 **Member of the AERES Panel Review** (Agency for the Evaluation of Research Activities and Higher Education – appointed by the Ministry of Research and Higher Education), France
- 2012 **Member of the Panel Review for the French National Agency of Research**, France
- 2007 **Member of the Panel Review for the Israel Science Foundation**, Israel
- 2007 **Member of the Panel Review for the CNES** (National Center of Space Studies), France

2007 **Member of the Panel Review for the Research Department of the "Nord – Pas de Calais" State, France**

**Review for Journals and Conferences**

2016-2020 **Editor in Chief** of the international journal "AIMS-Geosciences" (<http://www.aimspress.com/news/114.html>)

2016-present **Member of the Editorial Board** of the Journal "International Journal of Research and Innovation in Social Science"

**Reviewer for the following journals** (about 10 reviews/year)

Geophysical Research Letters, Journal of Geophysical Research, Atmospheric Chemistry and Physics, Remote sensing of Environment, Remote Sensing, International Journal of Applied Earth Observation and Geoinformation, I.E.E.E., International of Digital Earth, Atmospheric Environment, International Journal of Remote Sensing, Atmospheric Research, Journal of Imaging, Geoscientific Model Development, AIMS-Geosciences, Canadian Journal of Remote Sensing...

2020 **Reviewer** for the IGARSS conference, Waikoloa Hawaii, USA

2019 **Reviewer** for the for the Fall AGU, San Francisco

2019 **Reviewer** for the IGARSS conference, Yokoyama, Japan

2019 **Reviewer** for the JpGU, Chiba, Japan

2018 **Reviewer** for the Fall AGU, Washington D.C.

2018 **Reviewer** for the IGARSS conference, Valencia, Spain

2018 **Reviewer** for the JpGU, Chiba, Japan

2018 **Reviewer** for the ESA Land Product Validation and Evolution Conference, Frascati, Italy

2017 **Reviewer** for the Fall AGU, New-Orleans

2017 **Reviewer** for the Joint JpGU/AGU, Chiba, Japan

**International conferences**

2021 **Chairman and Convener** of a session at the JpGU, Yokohama, Japan

2020 **Chairman and Convener** of a session at the Fall AGU, San Francisco (accepted but withdrawn due to Covid-19)

2020 **Chairman and Convener** of a session at the JpGU, Chiba, Japan (accepted but withdrawn due to Covid-19)

2020 **Chairman and Convener** of an Invited session at IGARSS, Waikoloa Hawaii (accepted but withdrawn due to Covid-19), **Chairman** of another session

2020 **Chairman and Convener** of a session at the JpGU, Chiba, Japan (accepted but withdrawn due to Covid-19)

2019 **Chairman and Convener** of a session at the Fall AGU, San Francisco

2019 **Chairman and Convener** of a session at the JpGU, Chiba, Japan

2018 **Chairman and Convener** of a session at the Fall AGU, Washington D.C.

2018 **Convener** of the CEOS-WGCV - NASA/ESA - ACIX-II & CMIX-I 1<sup>st</sup> workshop (45 researchers), Washington D.C.

2018 **Chairman and Convener** of an Invited session at IGARSS, Valencia, Spain

2018 **Chairman and Convener** of a session at the JpGU, Chiba, Japan

- 2017 **Chairman and Convener** of a session at the Fall AGU, New-Orleans
- 2017 **Chairman and Convener** of a session at the Joint JpGU/AGU, Chiba, Japan
- 2016 **Convener** of the CEOS-WGCV - NASA/ESA - ACIX-I 1<sup>st</sup> Workshop (35 researchers), College Park
- 2020 **Member of the Scientific Committee** for the IGARSS conference, Waikoloa Hawaii, USA
- 2019 **Member of the Scientific Committee** for the IGARSS conference, Yokoyama, Japan
- 2018 **Member of the Scientific Committee** for the 6<sup>th</sup> International Conference on Mapping and Remote Sensing, Sanya, China
- 2018 **Member of the Scientific Committee** for the IGARSS conference, Valencia, Spain
- 2018 **Member of the Scientific Committee** for the ESA - Land Product Validation and Evolution Conference, Frascati, Italy
- 2017 **Member of the Scientific Committee** for the 4<sup>th</sup> International Conference on Multidisciplinary Research & Practice, Ahmedabad, Gujarat, India

### Organization of Workshops

- 2019 **Co-Organizer** of the CEOS-WGCV - NASA/ESA - ACIX-II & CMIX-I 2<sup>nd</sup> workshop - (45 researchers), ESRIN, Frascati, Italy – *International*
- 2018 **Organizer** of the CEOS-WGCV - NASA/ESA - ACIX-II & CMIX-I 1<sup>st</sup> workshop - (45 researchers), Washington D.C. – *International*
- 2016 **Organizer** of the CEOS-WGCV - NASA/ESA - ACIX-I 1<sup>st</sup> workshop in (35 researchers), College Park – *International*
- 2008 **Organizer** of the “Radiative Budget in the frame of the CHARMEX Experiment” (80 researchers) Toulouse, France - *International*.
- 2004 **Organizer** of the "Prospective National Aerosols" (60 researchers), Wimereux, France – *National*
- 2000 **Organizer** of the 2<sup>nd</sup> International Workshop in the framework of the European Project COLORS (45 researchers), Wimereux, France – *International*.

### Committee Membership

#### **Local**

- 2020-2021 **Member of the “PTK Symposium Planning” committee** at University of Maryland
- 2019-2020 **Department Advisory Committee Representative** at BSOS/Geography at University of Maryland
- 2018-2019 **Merit Review Task force** for Department Committee at BSOS/Geography at University of Maryland
- 2018-2019 **Alternate Research Faculty representative** for Department Committee at BSOS/Geography at University of Maryland
- 2018-2019 **Faculty Promotion (Professor)** Department Committee at BSOS/Geography at University of Maryland
- 2018 **Coordinator** of the “Meet the Research Faculty” event at BSOS/Geography at University of Maryland
- 2018 **Member of Research Faculty Promotions Task Force** at BSOS/Geography at University of Maryland
- 2018 **MPS-GIS Promotion** committee at BSOS/Geography at University of Maryland

- 2017-2018 **Alternate Representative** for the Undergraduate Committee at BSOS/Geography at University of Maryland
- 2015-2016 **Alternate Representative** for the MPS GIS Organizational Committee at BSOS/Geography at University of Maryland
- 2015 **Chair** of the Faculty Search Committee for 2 positions at BSOS/Geography at University of Maryland
- 2015-2016 **Faculty Promotion (Professor) Committee** at BSOS/Geography at University of Maryland
- 2007-2011 **Merit Committee**, University Blaise Pascal , France
- 2007-2011 **Committee for the "Valorization of Professional Experience"**, University Blaise Pascal, France
- 2001-2005 **Committee for the "Valorization of Professional Experience"**, University of the Littoral Opal Coast, France
- 1997-2014 **Promotions Committee**: University Blaise Pascal in Clermont-Ferrand, and University of the Littoral Opal Coast, France.
- 1997-2014 **University Search Committee for positions at**: University Blaise Pascal in Clermont-Ferrand, University Paul Sabatier in Toulouse, University Sciences and Technics in Lille, University of the Littoral Opal Coast in Dunkerque, and University Toulon-Var in Toulon, France
- Elected Positions
- 2007-2011 **University Council - Studies and University Life**, University Blaise Pascal, France
- 2007-2011 **University Council - Executive Committee** (it includes the President, the 3 Vice-Presidents, and 3 elected professors), University Blaise Pascal, France
- 2001-2005 **University Council - Studies and University Life**, University of the Littoral Opal Coast, France
- 2008-2010 **Administrative Council** of the Observatory OPGC, University Blaise Pascal.
- 2001-2005 **Scientific Council of the Ph.D School**, University of the Littoral Opal Coast, France
- National**
- 2011-2015 **Joint Commission of the National Council of the Universities**, France
- 2011-2014 **Working group appointed by the National Department of Research** "How to keep active research and teaching of small scientific disciplines?"
- Elected Positions
- 2020-2024 **Member of the French National Council of the Universities** (section 37 – Professor), Paris, France
- 2011-2015 **Vice-President (for Professor) of the French National Council of the Universities** (section 37), France
- 2011-2015 **President of the Group 8 of the French National Council of the Universities** (sections 34, 35, 36, 37), France
- 2003-2007 **Vice-President (for Assistant-Professor) of the French National Council of the Universities** (section 37), France
- 2011-2015 **Member of the French National Council of the Universities** (section 37 – Professor), Paris, France
- 1998-2007 **Member of the French National Council of the Universities** (section 37 – Assistant Professor), Paris, France

## RESEARCH FOCUS

- Radiative Transfer,
- Satellite Remote Sensing (MODIS, VIIRS, AVHRR, LANDSAT, Sentinel-2, Sentinel-3, POLDER, MISR, MERIS, DMC, World View 3...),
- Land surface characterization using atmospheric corrections of land areas,
- Physics and chemistry of aerosols (optical, chemical and microphysical characterization & their climatic and health impacts),
- Agriculture (crop detection and yield estimation),
- Satellite CAL/VAL exercises (satellite calibration, satellite product validation),
- Modeling & Parametrization,
- Polarization of light,
- Field campaigns,
- Instrument development.

## RESEARCH AWARD and GRANTS

### Research Award

2018 Robert H. Goddard Science Award (Team), Land Long Term Data Record Team

### Research Grants

**PI** of the proposal " Calibration and Uncertainties Validation of Satellite data over Land ", NASA, \$1,800,000 for 2021-2024, *submitted Dec 2020*.

**PI** of the proposal "Long Term Multi-Instrument Land Surface Reflectance Records and Applications", NASA, \$2,400,000 for 2019-2022, *funded in 2019*.

**PI** of the proposal "Development of Surface Reflectance Products for the NASA Harmonization Landsat Sentinel Project", NASA, \$1,200,000 for 2019-2022, *funded in 2019*.

**PI** (after 2018) of the proposal "Eco-hydrological modeling using field-based and Earth Observations to assess water use efficiency and support agricultural water resources management", NASA, \$1,641,074 for 2017-2019, *funded in 2017*.

**PI** of the proposal "Land Atmosphere Processing and Science Support", NASA, \$482,217 for 2018-2021, *funded in 2018*.

**PI** of the proposal "Long Term Land Surface Reflectance Records and Applications", NASA, \$2,400,000 for 2017-2019, *funded in 2017*.

**PI for UMD** of the proposal "Support for the Harmonization Landsat-8/Sentinel-2 project: BRDF correction tool", NASA, \$100,000 for 2018-2019, *funded in 2019*

**PI for UMD** of the proposal "Improving NASA's atmospheric correction using historic aerosol/ocean color data", SSAI/NASA., \$75,000 for 2020-2023, *funded in 2020*

**PI for UMD** of the proposal "Toward a Consistent Land Long Term Climate Data Records from Large Field of View Polar Orbiting Earth Observation Satellites", NASA, \$375,000 for 2016-2019, *funded in 2016*.

**PI for UMD** of the proposal "Optimizing Short Wave Infrared (SWIR) based Atmospheric Correction", SSAI/NASA \$18,233 for 2014-2015, *funded in 2015*.

**Co-PI** (with E. Vermote, NASA) of the proposal "Landsat-8 - Sentinel-2 atmospheric correction algorithms maintenance", USGS/NASA, \$400,000 for 2020-2022, *funded in 2020*.

**Co-PI** (with E. Vermote, NASA) of the proposal "Evaluation of World View 3 data", National Geospatial-Intelligence Agency/NASA, \$500,000 for 2019-2023, *funded in 2019*.

**Co-PI** (with E. Vermote, NASA) of the proposal "Landsat-8 - Sentinel-2 atmospheric correction algorithms maintenance", USGS/NASA, \$100,000 for 2019, *funded in 2019*.

**Co-PI** (with M. Claverie, UMD) of the proposal “Contribution to the Harmonization Landsat-8/Sentinel-2 project: Refinement and Application to Agriculture”, NASA, \$200,000 for 2017, *funded in 2017*.

**Co-PI** (with E. Vermote, NASA) of the proposal “Atmospheric Correction for data acquired by the MaRS instrument”, National Geospatial-Intelligence Agency, \$105,000 for 2016-2017, *funded in 2016*.

**Co-I** of the proposal “Contribution to the Harmonization Landsat-8/Sentinel-2 project: Refinement and Application to Agriculture”, NASA, \$300,000 for 2018, *funded in 2018*.

**Co-I** of the proposal “Crop Yield Assessment and Mapping by a Combined use of Landsat-8, Sentinel-2 and Sentinel-1 Images”, NASA-MUSLI, \$538,741 for 2018-2021, funded in 2018.

**Co-I** of the proposal “Sentinel 3 Data for Land Science: Calibration Product Evaluation, Generation and Validation”, NASA, \$575,419 for 2017-2022, *funded in 2017*.

**Co-I** of the proposal “A 35-Year Multi-Sensor Global Burned Area Data Record”, NASA, \$2,684,356 for 2017-2022, *funded in 2017*.

**Co-I** of the proposal “Land Surface Reflectance Validation Research and Algorithm Refinement”, NASA, \$1,500,000 for 2015-2017, *accepted in 2014 and funded in 2015*.

### **Before 2014 in FRANCE (major activities)**

**PI** of the proposal “VEGETATION and MODIS: a joint project of R & D for the Earth Observation”, awarded by CNES (French National Center for Space Studies)- 1998-2000

**PI** of the proposal “Development of an operational system for atmospheric correction of LANDSAT 5TM and 7ETM+ images”, awarded by ESA (European Space Agency)- 2000-2005

**Co-PI** of the proposal “Development of an Atmospheric Chamber devoted to aerosols studies: Links between optical and chemical properties”, awarded by the CPER (French National and State Contract Plan), Action "Air Quality", Axe "Aerosols"- 2000-2003

**Co-PI** of the proposal “Assessment of the aerosol radiative impacts in an industrial environment”, awarded by the CPER (French National and State Contract Plan), Action "Air Quality", Axe "Aerosols" -2005-2006

**Co-PI** of the proposal “European Project COLORS (Study of European Coastal Waters from Space)” – I was the PI of the atmospheric activities for the project, awarded by the CEE (European Economic Community) - DG XII department - 1998-2001

**Co-PI** of the proposal “Development of a photometer to measure the radiances reflected by the surface in the La Crau site”, awarded by the CNES (French National Center for Space Studies), 1998-2000

**Co-PI** of the proposal “MERIS Atmospheric Corrections over Land, European Spatial Agency”, awarded by the ESA (European Space Agency)- n°PO.SW.ESA.GS.00267- 1995-1997.

**Co-PI** of the proposal “How to understand the atmosphere in Beijing”, awarded by the French State “Ile-de-France” and the city of Beijing- 2004-2009.

**Co-I** of the proposal “VEGETATION Instrument and MODIS: a joint research and development project on terrestrial monitoring”, awarded by the "The VEGETATION International Users Committee", Feb.95-Nov98

**Co-I** of the proposal “Development and Testing of Operational Atmospheric Correction of Satellite Data for the NSF-LTER Sites”, awarded by the NASA Office of Mission to Planet Earth, April 95 to March 97, n°3985-TE/94-0050

**Co-I:** Participation to a large number of projects awarded by French National Programs (National Program of Satellite Remote Sensing, National Program of Atmospheric Chemistry, Primequal Program...) and by several CPER programs (French National and State Contract Plan funded projects)

**Co-I** of a Research study based on the AMMA Project in the framework of the network of CNRS laboratories (FDR CNRS 1818) (2004-2006)

I was also involved in the atmospheric activities (optical analysis, remote sensing...) of the Clermont Observatory for Terrestrial Physics (OPGC) at the University Blaise Pascal– responsible for optical analysis

***Involved in several experiments and field campaigns: CHARMEX (2008-2013 in the Mediterranean Sea), AMMA (2004-2007 in Africa), CAPITOU (2004-2005 in France), "Ile-de-France/Beijing" (2004-2009 in China), IRENI (2005 in France), ESCOMPTE (2001 in France), MINOS (2001 in Crete)***

## PUBLICATIONS

### **Book chapters**

- Bernardes S., Madden M., Astuti I., Chuvieco E., Cotten D., Dennison P., Dronova I., Gitas I., Gong P., Franch-Gras B., Hancher M., Hirano A., Howard A., Hu X., Huete A., Jordan T., Justice C., Lawrence R., Lu L., Mishra D., Mishra S., Miura T., Mountrakis G., Pal M., Remillard C., Roberts D., **Roger J.C.**, Singh K., Somers B., Stavrakoudis D., Sun W., Sun G., Thau D., Tits L., Uesry L., Vermote E., Wang C., Wang M., Weng Q., Xu W., Yoa T., Yoshioka H., Zhang L., Zhang Q., Zhang Z., 2019, Chapter 7: Image Processing and Analysis Methods, in *Manual of Remote Sensing, 4th Edition*, 631-868, DOI: 10.14358/MRS/Chapter7, Published by American Society for Photogrammetry and Remote Sensing, 957 pp.
- Vermote E., **Roger J.C.**, Franch B., and Justice C., 2017, Atmospheric Correction for Top of the Atmosphere Remote Sensing Reflectance over Land Surfaces: Theoretical background, History and Recent Advances, 2017, in *Atmospheric Correction over Land, 4th Edition*.
- Mallet M., Pont V., Lioussé C., Mariscal A., Thouret V., Gomes L., Pelon J., Osborne S., J. Haywood, Dubuisson P., **Roger J.C.**, and Goloub P., 2007, "Aerosols Direct Radiative Forcing on Djougou (Northern Benin) During the AMMA Dry Season Experiment", NATO Science Series: IV: Earth and Environmental Sciences, A. Mellouki and A.R. Ravishankara (eds.), Regional Climate Variability and its Impacts in the Mediterranean Area, 103–111, Springer Editor.
- Vermote E., and **Roger J.C.**, 1996, "Radiative Transfer Modeling for Calibration and Atmospheric Correction" chapter 3 of *Advances in the use of NOAA AVHRR for Land Applications*, pp 49-72, D'Souza, G., Belward, A.S and Malingreau, J.P (Eds.), published by Kluwer Academic Press, Dordrecht, 479pp.

### **Refereed Articles (55 papers, H factor = 29)**

- Skakun S., Kalecinski N., Brown M., Johnson D., Vermote E., **Roger J.C.**, Franch B., 2021, Assessing within-field corn and soybean yield variability from Worldview-3, Planet, Sentinel-2, and Landsat 8 satellite imagery. *Remote Sensing*, Accepted
- Villaescusa-Nadal J.L., Vermote E. F., Franch B., Santamaria-Artigas A., **Roger J.C.**, and Skakun S., 2021, MODIS-based AVHRR Cloud and Snow Separation Algorithm (MACSSA). *IEEE transactions on geoscience and remote sensing*. Accepted.
- Santamaria-Artigas, A., Vermote, E.F., Franch, B., **Roger, J.-C.**, Skakun, S., 2021. Evaluation of the AVHRR surface reflectance long term data record between 1984 and 2011. *Int. J. Appl. Earth Obs. Geoinf.* 98, 102317. <https://doi.org/10.1016/j.jag.2021.102317>
- Korgo B., Kafando P., Zouma B., Bado N., Zerbo I., **Roger J.C.** and Bathiebo J., 2021, The Radiative Forcing of Aerosols in a West Africa Sahelian Urban City: Case Study of Ouagadougou. *Atmospheric and Climate Sciences*, 11, 73-85. doi: 10.4236/acs.2021.111005.
- Korgo B., Zouma B., Kafando P., Bado N., Zoungrana M., Zerbo I., **Roger J.-C.** and Bathiebo J.D., 2020, Diurnal Variability of the Radiative Impact of Atmospheric Aerosols in Ouagadougou, Burkina Faso: A Seasonal Approach, *Journal of Environmental Protection*, 11, 1089-1102.
- Skakun S., Vermote E. F., Santamaria Artigas A. E., Rountree W. H., **Roger J.C.**, 2020, An experimental sky-image-derived cloud validation dataset for Sentinel-2 and Landsat 8 satellites over NASA GSFC, *International Journal of Applied Earth Observations and Geoinformation*, 95 (2021) 102253, doi.org/10.1016/j.jag.2020.102253
- De Pascale F., and **Roger J.C.**, 2020, Coronavirus: An Anthropocene's hybrid? The need for a geothic perspective for the future of the Earth, *AIMS Geosciences*, 6 (1): 131–134. DOI: 10.3934/geosci. 2020008.



- Skakun S., Vermote E., Franch B., **Roger J.C.**, Kussul N., Ju J. and Masek J., 2019, Winter Wheat Yield Assessment from Landsat 8 and Sentinel-2 Data: Incorporating Surface Reflectance, Through Phenological Fitting, into Regression Yield Models, *Remote Sensing*, 11, 1768; doi:10.3390/rs11151768.
- Franch B., Vermote E., Skakun S., **Roger J.C.**, Masek J., Junchang Ju, and Villaescusa-Nadal J.L., 2019, A method for Landsat and Sentinel 2 (HLS) BRDF normalization, *Remote Sensing*, 11, 632; doi:10.3390/rs11060632.
- Santamaria-Artigas A., Franch B., Guillevic P., **Roger J.C.**, Vermote E.F., and S. Skakun S., 2019, Evaluation of Near Surface Air Temperature from Reanalysis over the United States and Ukraine: Application to Winter Wheat Yield Forecasting, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10.1109/JSTARS.2019.2902479.
- Villaescusa-Nadal J.L., Franch B., Vermote E., Roger J.C. and Justice C., 2019, Improving the AVHRR's BRDF correction, *Remote Sensing*, 11, 502; doi:10.3390/rs11050502.
- Franch B., Vermote E. F., Skakun S., **Roger J. C.**, Becker-Reshef I., Murphy E., & Justice C., 2019, Remote sensing based yield monitoring: Application to winter wheat in United States and Ukraine. *International Journal of Applied Earth Observation and Geoinformation*, 76, 112-127.
- Skakun S., Vermote E. F., **Roger J.-C.**, Justice C. O., & Masek J. G., 2019, Validation of the LaSRC cloud detection algorithm for Landsat 8 images. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 12(6), DOI:10.1109/JSTARS.2019.2894553.
- Villaescusa-Nadal J. L., Franch B., **Roger J.C.**, Vermote E., Skakun S., and Justice C., 2019, Spectral adjustment model's analysis and application to remote sensing data, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Doi: 10.1109/JSTARS.2018.2890068
- Franch B., Vermote E., Skakun S., **Roger J.C.**, Santamaria-Artigas A., Villaescusa-Nadal J.L., and Masek J., 2018, Towards Landsat and Sentinel-2 BRDF normalization and albedo estimation: a case study in the Peruvian Amazon forest, *Frontiers in Earth Science, section Interdisciplinary Climate Studies*, Vol 6., Art 185, doi:10.3389/feart.2018.00185.
- Claverie M., Ju J., Masek J. G., Dungan J. L., Vermote E. F., **Roger J.C.**, Skakun S. V., and Justice C. O., 2018, The Harmonized Landsat and Sentinel-2 surface reflectance data set, *Remote Sensing of Environment*, 219, 145-161
- Zhang H. K., Roy D. P., Yan L., Li Z, Huang H., Vermote E., Skakun S., and **Roger J.C.**, 2018, Characterization of Sentinel-2A and Landsat-8 top of atmosphere, surface, and nadir BRDF adjusted reflectance and NDVI differences, *Remote Sensing of Environment*, 2018, doi:10.1016/j.rse.2018.04.031
- Doxani G., Vermote E., **Roger J.C.**, Gascon F., Adriaensen S., Frantz D., Hagolle O., Hollstein A., Kirches G., Li F., Louis J., Mangin A., Pahlevan N., Pflug B., and Vanhellefont Q., 2018, Atmospheric Correction Inter-comparison eXercise, *Remote Sensing*, 2018, 10, 352; doi:10.3390/rs10020352.
- Skakun S., Justice C.O., Vermote E., and **Roger J.C.**, 2018, Transitioning from MODIS to VIIRS: an analysis of inter-consistency of NDVI data sets for agricultural monitoring, *International Journal of Remote Sensing*, 39:4, 971-992, DOI:10.1080/01431161.2017.1395970
- Skakun S., Vermote E., **Roger J.C.**, and Franch B., 2017, Multi-spectral misregistration of Sentinel-2A images: analysis and implications for potential applications, *IEEE Geoscience and Remote Sensing Letters*, 14(12), 2408-2412.
- Skakun S., Vermote E., **Roger J.C.**, and Franch B., 2017, Combined use of Landsat-8 and Sentinel-2A images for winter crop mapping and winter wheat yield assessment at regional scale, *AIMS Geosciences*, 3 (2): 163-186, DOI: 10.3934/geosci.2017.2.163
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- Skakun S., Franch B., Vermote E., **Roger J.C.**, Justice C., Masek J., and Murphy E., 2018, Winter Wheat Yield Assessment using Landsat-8 and Sentinel-2 Data, *IGARSS 2018*, Valencia, Spain, July 22-27, 2018.
- Santamaria-Artigas A., Franch B., Guillevic P., **Roger J.C.**, and Vermote E., 2018, Comparison of Surface Air Temperature Products from Reanalysis over United States and Ukraine: Application to Wheat Yield Forecasting, *IGARSS 2018*, Valencia, Spain, July 22-27, 2018.
- Roger J.C.**, Guillevic P., Becker-Reshef I., Bandaru V., Coffin A., French A., Hatfield J., Humber M., Hansen M., Thomas B., Vermote E., Justice C., César Izaurralde R., Dempewolf J., Nakalembe C., Cryder M., Sanchez C., Jeong J., Di Bella C., Eugenia Beget M., Tumbo S., Meyer B., Adjorlolo C., and Frison P.-L., 2018, Eco-hydrological modeling using field-based and Earth Observations to assess water use efficiency and support agricultural water resources management, *NASA Water Resources Sciences Team*, Boulder, USA, June 27-28, 2018.
- Roger J.C.**, Guillevic P., Becker-Reshef I., Bandaru V., Coffin A., French A., Hatfield J., Humber M., Hansen M., Thomas B., Vermote E., Justice C., César Izaurralde R., Dempewolf J., Nakalembe C., Cryder M., Sanchez C., Jeong J., Di Bella C., Eugenia Beget M., Tumbo S., Meyer B., Adjorlolo C., and Frison P.-L., 2018, Details of the eco-hydrological modeling project using field-based and Earth Observations to assess water use efficiency and support agricultural water resources management, *NASA Water Resources Sciences Team*, Boulder, USA, June 27-28, 2018.

- Vermote E. **et al.**, 2018, A Generic Approach For Inversion And Validation Of Surface Reflectance and Aerosol Over Land: Application To Landsat 8 And Sentinel 2, *Land Cover/Land Use Changes (LC/LUC) and Impacts on Environment in South/Southeast Asia - International Regional Science Meeting*, Quezon City, Philippines, May 28-30th, 2018.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Masek J., and Justice C., 2018, Landsat-8 And Sentinel-2 Land Surface Reflectance from LaSRC, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Skakun S., Franch B., Vermote E., **Roger J.C.**, Justice C., and Masek J., 2018, Agricultural monitoring with remote sensing, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Villaescusa J.L., Franch B., **Roger J.C.**, Vermote E., and Justice C., 2018, Improving the cross-calibration of Landsat8OLI, Sentinel 2 and MODIS sensors through spectral adjustment methods, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Franch B., Vermote E., Skakun S., and **Roger J.C.**, 2018, HLS Surface Albedo Estimation and Evaluation Against In Situ Measurements Across the Australia OzFlux network, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Masek J., Ju J., **Roger J.C.**, Dungan J., Skakun S., Claverie M., Vermote E., and Justice C., 2018, Harmonized Landsat/Sentinel-2 Reflectance Products for Land Monitoring, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Skakun S., **Roger J.C.**, and Vermote E., 2018, Multi-spectral misregistration of Sentinel-2A/MSI images, *JpGU 2018*, Chiba, Japan, May 20-24, 2018.
- Roger J.C.**, Vermote E., Skakun S., Doxani, G., and Justice, C., 2018, Description of the Land Surface Reflectance retrieval from LaSRC for Sentinel-2 and Landsat-8, *Land Product Validation and Evolution (LPVE) Workshop*, Frascati, Italy, 27 Feb. - 1 March, 2018.
- Doxani G., Gascon F., Vermote E., and **Roger J.C.**, 2018, Atmospheric Correction Inter-comparison Exercise (ACIX), *Land Product Validation and Evolution (LPVE) Workshop*, Frascati, Italy, 27 Feb. - 1 March, 2018.
- Vermote E., **Roger J.C.**, Skakun S., and Justice, C., 2018, A generic approach for Land surface Reflectance Validation, *Land Product Validation and Evolution (LPVE) Workshop*, Frascati, Italy, 27 Feb. - 1 March, 2018.
- Claverie M., Masek J., Ju J., Vermote E., Skakun S., **Roger J.C.**, Tarrio K., Woodcock C., and Dungan J., 2018, The Harmonized Landsat -8 Sentinel-2 (HLS) data set, *Land Product Validation and Evolution (LPVE) Workshop*, Frascati, Italy, 27 Feb. - 1 March, 2018.
- Vermote E., **Roger J.C.**, Skakun S., and Justice C., 2018, Maintenance and refinement of the Land Surface Reflectance Code (LaSRC) for Landsat's and Sentinel 2's, *Landsat Sciences Team Meeting*, Sioux Falls, USA, 21-22 Feb, 2018.
- Roger J.C.**, Vermote E., Skakun S., and Doxani, G., 2018, Validation of the Sentinel-2 Land Surface Reflectances Retrieved from LaSRC, *2<sup>nd</sup> Sentinel-2 Validation Team Meeting*, Frascati, Italy, 29-31 Jan., 2018.
- Vermote E., **Roger J.C.**, and Skakun S., 2018, Validation of the LaSRC Sentinel 2 Land Surface Reflectance Product, *2<sup>nd</sup> Sentinel-2 Validation Team Meeting*, Frascati, Italy, 29-31 Jan., 2018.
- Skakun S., Vermote E., **Roger J.C.**, and Justice C., 2018, Analysis of Multi-spectral Misregistration of Sentinel 2A/MSI Images, *2<sup>nd</sup> Sentinel-2 Validation Team Meeting*, Frascati, Italy, 29-31 Jan., 2018.
- Doxani G., Gascon F., Vermote E., and **Roger J.C.**, 2018, Atmospheric Correction Inter-comparison Exercise (ACIX), *2<sup>nd</sup> Sentinel-2 Validation Team Meeting*, Frascati, Italy, 29-31 Jan., 2018.
- Vermote E., Franch B., **Roger J.C.**, Skakun S., Becker-Reshef I., and Justice C. O., 2018, Prediction of Winter Wheat High Yield from Remote Sensing-Based Model: Application in the United States and Ukraine, *AMS 2018, 98th Meeting*, Austin, USA, 7-11 Jan., 2018.
- Villaescusa J.L., Franch B., **Roger J.C.**, Vermote E., and Justice C., 2017, Spectrally adjusted surface reflectance and its dependence with NDVI for Landsat and Sentinel 2, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Holben B., and Justice C., 2017, Retrieval of the Land Surface Reflectance for Landsat-8 and Sentinel-2 and its validation, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Santamaría-Artigas A., Franch B., Vermote E., **Roger J.C.**, and Justice C., 2017, Intercomparison of 30+ years of AVHRR and Landsat-5 TM Surface Reflectance using Multiple Pseudo-Invariant Calibration Sites, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Masek J., Ju J., Claverie M., Vermote E., Dungan J., **Roger J.C.**, Skakun S., and Justice C., 2017, Harmonized Landsat/Sentinel-2 Reflectance Products for Land Monitoring, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Vermote E., Doxani G., Gascon F., **Roger J.C.**, and Skakun S., 2017, Atmospheric Correction Inter-comparison Exercise (ACIX), *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.

- Franch B., Skakun S., Vermote E., and **Roger J.C.**, 2017, Landsat and Sentinel-2A Surface Albedo Estimation and Evaluation Against In Situ measurements Across the US SURFRAD Network, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Skakun S., **Roger J.C.**, Vermote E., Franch B., Becker-Reshef I., Justice C., and Masek J., 2017, Combined Use of Landsat-8 and Sentinel-2 Data for Agricultural Monitoring, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Franch B., Vermote E., **Roger J.C.**, Skakun S., Becker-Reshef I., and Justice C., 2017, Prediction of winter wheat high yield from remote sensing based model: application in United States and Ukraine, *Fall AGU 2017*, New Orleans, USA, 11-15 Dec., 2017.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Guillevic P., Justice C., Becker-Reshef I., Dubovik O., Holben B., Masek J., Tucker J., 2017, Land Surface Reflectance, Mapping and Applications, *5th ICMRS*, Jiujiang, China, 11-13 November 2017.
- Roger J.C.**, Guillevic P., Vermote E., Skakun S., 2017, New 6S Vectorial Code Including the Thermal Spectrum, *APOLO 2018*, Hefei, China, 24-27 October 2017.
- Vermote E., **Roger J.C.**, et al., 2017, Uncertainties in remote sensing derived surface reflectance, 2017, *Workshop on Uncertainties in Remote Sensing*, ESA/ESRIN, Frascati, Italy, October 24-25 2017
- Roger J.C.**, Vermote E., Skakun S., Franch B., Guillevic P., Justice C., Masek J., Holben B., Tucker J., 2017, Land Surface Reflectance Fundamental and Application to Crop Yield Forecast, *Workshop on Surface Reflectance and Land Applications*, Clermont-Ferrand, France, 20 October 2017.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Justice C., and Holben B., 2017, Validation of The Land Surface Reflectance Fundamental Climate data Record, *RAQRS 2017*, Torrent, Spain, 18-22 September 2017.
- Roger J.C.**, Guillevic P., Vermote E., and Skakun S., 2017, New Version of the 6S Code Including the Thermal Spectrum, *RAQRS 2017*, Torrent, Spain, 18-22 September 2017.
- Franch B., Vermote E., **Roger J.C.**, Skakun S., Becker-Reshef I., and Justice C., 2017, Improving High Yield Prediction of Remote Sensing Based Model : Application to Winter Wheat in United States, *RAQRS 2017*, Torrent, Spain, 18-22 September 2017.
- Vermote E., **Roger J.C.**, Skakun S., and Franch B., 2017, Atmospheric Correction for Top of the Atmosphere Remote Sensing Reflectance over Land Surface at High Spatial Resolution: Application to Landsat-8 and Sentinel-2 Data, *RAQRS 2017*, Torrent, Spain, 18-22 September 2017.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Holben B., and Justice C., 2017, Evaluation of The Land Surface Reflectance Fundamental Climate data Record, *IGARSS 2017*, Fort Worth, USA, 23-28 July, 2017.
- Skakun S., **Roger J.C.**, Vermote E., Justice C., and Masek J., 2017, Automatic Co-Registration of Multi-Temporal Landsat-8/OLI and Sentinel-2A/MSI Images, *IGARSS 2017*, Fort Worth, USA, 23-28 July, 2017.
- Vermote E., **Roger J.C.**, Skakun S., Franch B., and Justice C., 2017, A Generic Approach For Inversion And Validation Of Surface Reflectance and Aerosol Over Land: Application To Landsat 8 And Sentinel 2, *LCLUC SARI International Regional Science Meeting in South/Southeast Asia*, Chiang Mai, Thailand, 17-19th July, 2017
- Vermote E., **Roger J.C.**, et al., 2017, A generic method for retrieval and validation of aerosol and surface reflectance over land: application to Landsat 8 and Sentinel 2, *Landsat Sciences Team meeting*, Sioux falls, USA, 11-13<sup>th</sup> of July 2017.
- Skakun S., **Roger J.C.**, Franch B., Vermote E., Justice C., 2017, Crop mapping and crop production estimation using multi-source remote sensing data, *Joint JpPU-AGU 2017*, Chiba, Japan, 20-25<sup>th</sup> May, 2017.
- Roger J.C.**, Vermote E., Skakun S., Franch B., Holben B., Justice C., 2017, Evaluation of The Landsat-8/Sentinel-2 Land Surface Reflectance, *Joint JpPU-AGU 2017*, Chiba, Japan, 20-25<sup>th</sup> May, 2017.
- Franch B., Vermote E., Skakun S., Santamaria-Artigas A., **Roger J.C.**, 2017, Landsat and Sentinel 2A Surface Albedo estimation. Application to evapotranspiration retrieval, *Joint JpPU-AGU 2017*, Chiba, Japan, 20-25<sup>th</sup> May, 2017.
- Doxani G., Gascon F., Vermote E., **Roger J.C.**, 2017, Atmospheric Correction Inter-comparison Exercise (ACIX), *Joint JpPU-AGU 2017*, Chiba, Japan, 20-25<sup>th</sup> May, 2017.
- Vermote E., **Roger J.C.**, Skakun S., Franch B., 2017, A generic approach for inversion and validation of surface reflectance over land: Application for Landsat-8 and Sentinel-2, *Joint JpPU-AGU 2017*, Chiba, Japan, 20-25<sup>th</sup> May, 2017
- Vermote E., **Roger J.C.**, Franch B., Justice C. O. Csiszar, I., Devadiga S., and Masuoka E., 2017, Toward a Consistent Land Long Term Climate Data Records from Large Field of View Polar Orbiting Earth Observation Satellites, *American Meteorological Society*, Seattle, USA, 22-26 Jan., 2017.
- Masek J., Ju. J., Vermote E., Claverie M., **Roger J.C.**, et al., 2017, Harmonized Landsat/Sentinel 2 Data products, *Landsat Science Team Meeting workshop*, Boston, USA, 10-12 Jan., 2017.



- Vermote E., **Roger J.C.**, Gascon F., and Doxani G., 2016, Atmospheric Correction Inter-comparison Exercise. *Fall AGU 2016*, San Francisco, USA, 12-16 Dec., 2016.
- Roger J.C.**, Vermote E., Skakun S., Murphy E., Holben B., and Justice C., 2016, Evaluation Of The MODIS-VIIRS Land Surface Reflectance Fundamental Climate Data Record. *Fall AGU 2016*, San Francisco, USA, 12-16 Dec., 2016.
- Skakun S., Franch B., Vermote E., **Roger J.C.**, Becker-Reshef I., Justice C., Masek J., and Murphy E., 2016, Fusion of multi-source remote sensing data for agriculture monitoring tasks. *Fall AGU 2016*, San Francisco, USA, 12-16 Dec., 2016.
- Vermote E., **Roger J.C.**, Justice C., Skakun S., and Franch B., 2016, A Generic Approach For Inversion And Validation Of Surface Reflectance Over Land: Application To Landsat 8 And Sentinel 2, *1st Sentinel-2 Validation Team Meeting*, Frascati, Italy, Nov. 28-29, 2016.
- Doxani G., Gascon F., Vermote E., **Roger J.C.**, 2016, ACIX: Atmospheric Correction Inter-Comparison Exercise, *1st Sentinel-2 Validation Team Meeting*, Frascati, Italy, Nov. 28-29, 2016.
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- Skakun S., **Roger J.C.**, Vermote E., Masek J., and Justice C., 2016, Automatic Sub-Pixel Co-Registration of Multi-Temporal Sentinel-2A MSI and Landsat-8 OLI Images, *1st Sentinel-2 Validation Team Meeting*, Frascati, Italy, Nov. 28-29, 2016.
- Claverie M., Ju J., Skakun S., **Roger J.C.**, Vermote E., and Masek J., 2016, Contribution of the NASA Harmonized Landsat-Sentinel-2 project to the MSI quality assessment, *1st Sentinel-2 Validation Team Meeting*, Frascati, Italy, Nov. 28-29, 2016.
- Pahlevan N., **Roger J.C.**, Franz B., and Ahmad Z., 2016, Revisiting Short-Wave-Infrared (SWIR) Bands for Atmospheric Correction of Coastal Imagery, *Ocean Optics*, Victoria, Canada, Oct. 23-28, 2016.
- Vermote, E., **Roger J.C.**, Doxani, G., and Gascon, F., 2016, ACIX: Atmospheric Correction Intercomparison eXercise, *CEOS-WGCV-41*, Tokyo, Japan, Sep. 5-7 2016.
- Vermote E., Justice C., **Roger J.C.**, Skakun S., and Franch B., 2016, Status of the Landsat and Sentinel 2 Surface Reflectance Product, *Landsat Science Team Meeting*, Brookings, SD, 26-28 July 2016
- Roger J.C.**, Vermote E., Murphy E., Pinchaud M., and Holben B., 2016, Methodology and error budget for evaluating the MODIS-VIIRS land surface reflectance fundamental climate data record, *IGARSS 2016*, Beijing, China, 10-15 July, 2016
- Vermote E., **Roger J.C.**, Justice C., Franch B., and Claverie M., 2016, A Generic approach for inversion of surface reflectance over land: Overview, application and validation using MODIS and LANDSAT-8 data, *IGARSS 2016*, Beijing, China, 10-15 July, 2016
- Skakun S., Franch B., **Roger J.C.**, Vermote E., Becker-Reshef I., Justice C., and Santamaría Artigas A., 2016, Incorporating yearly derived winter wheat maps into winter wheat yield forecasting model, *IGARSS 2016*, Beijing, China, 10-15 July, 2016
- Vermote E., Justice C., Claverie M., Franch B., **Roger J.C.**, Becker-Reshef I., and Masek J., 2016, A harmonized Surface Reflectance product from the Landsat and Sentinel-2 Missions, *Living Planet Symposium 2016*, Prague, Czech Republic, 9-13 May, 2016.
- Roger J.C.**, Vermote E., Ferran G., Doxan G., and Niro F., 2016, ACIX: Atmospheric Correction Inter-comparison eXercise – A task carried out in the frame of CEOS-WGCV, *Living Planet Symposium 2016*, Prague, Czech Republic, 9-13 May, 2016.
- Claverie M., Vermote E., Ju J., **Roger J.C.**, Hagolle O., Defourny P., Justice C., and Masek, J., 2016, Early Evaluation of Three MSI Surface Reflectance Products, *Living Planet Symposium 2016*, Prague, Czech Republic, 9-13 May, 2016.
- Franch B., Vermote E., **Roger J.C.**, Skakun S., and Justice C., 2016, Data fusion Landsat 8-Sentinel-2 surface reflectance: research and development, *LCLUC-Musli workshop*, North Bethesda, USA, 18-19 April 2016.
- Vermote E., **Roger J.C.**, Kotchenova S., and Tanré D., 2016, New version of the second simulation of the satellite signal in the solar spectrum, 6SV2, *International Radiation, Symposium*, Auckland, New-Zeland, 16-22 April 2016.
- Roger J.C.**, Vermote E., and Justice C., 2016, Retrieval of land surface reflectance from remote sensing data and its validation: application to MODIS and VIIRS, *International Radiation, Symposium*, Auckland, New-Zeland, 16-22 April 2016.
- Gascon F., Doxani G., Vermote E., and **Roger J.C.**, 2016, ACIX: Atmospheric Correction Intercomparison eXercise, *CEOS-WGCV-40*, Canberra, Australia, March. 14-18 2016.

- Vermote E., **Roger J.C.**, Franch B., and Justice C., 2016, Toward a Consistent Land Long Term Climate Data Records from Large Field of View Polar Orbiting Earth Observation Satellites, *Global Climate Observation Conference*, Amsterdam, The Netherlands, 2-4 March 2016.
- Pahlevan N., and **Roger J.C.**, 2016, Revisiting SWIR-based Atmospheric Correction over Coastal waters, *Ocean Sciences 2016*, New-Orleans, USA, 21-26 February 2016.
- Franch B., **Roger J.C.**, Vermote E., Justice C., and Claverie M., 2016, Current status of Landsat 8 surface reflectance algorithm, *Landsat Science Team Meeting*, Blacksburg, VA, USA, January 12-14, 2016.
- Vermote E., Bender M., Claverie M., Franch B., Guillevic P., Murphy E., Ray J., **Roger J.C.**, S. Skakun, 2015, Land Climate Data Record group activities in Terrestrial Information Systems Laboratory, *NASA GSFC*, MD, USA, Nov 16, 2015
- Roger J.C.**, Vermote E., and Holben B., 2015 Protocol for validation of the Land surface reflectance fundamental climate data record using AERONET: Application to the global MODIS and VIIRS data records, *IGARSS 2015*, Milano, Italy, 26-31 July 2015.
- Pahlevan N., **Roger J.C.**, and Vermote E., 2015, Revisiting Short-Wave-Infrared (SWIR)-based Atmospheric Correction of Coastal Scenes, *IGARSS 2015*, Milano, Italy, 26-31 July 2015.
- Pahlevan N., **Roger J.C.**, Schaaf C., and Schott J., 2015, Using MODTRAN V5.3 to characterize radiometric performance of Landsat-8's Optical Land Imager (OLI) over dark targets, *36<sup>th</sup> review of Atmospheric Transmission Model meeting*, Dulles, USA, 9-11 June 2015.
- Roger J.C.**, Vermote E., Justice C.O., and Holben B., 2015, Validation of the MODIS and VIIRS Land Surface Reflectance: Application to Sentinel 3, *Sentinel-3 for Science*, Venice, Italy, 2-5 June 2015.
- Vermote E.F., Justice C.O., and **Roger J.C.**, 2015, Generic methods for cross-calibration and validation of the Sentinel 3 surface reflectance: Descriptions and Applications to MODIS and VIIRS, *Sentinel-3 for Science*, Venice, Italy, 2-5 June 2015.
- Hervo M., Sellegri K., Pichon J. M., **Roger J.C.**, and Laj P., 2015, Long term measurements of the estimated hygroscopic enhancement of aerosol optical properties, *EGU 2015*, Vienna, Austria, 12-17 Apr. 2015.
- Roger J.C.**, Vermote E., and Holben B., 2014, Protocol for Validation of the Land Surface reflectance fundamental climate data record using AERONET: Application to the global MODIS and VIIRS data records, *Fall AGU 2014*, San Francisco, USA, 15-19 Dec., 2014.
- Pahlevan N., Lee Z., and **Roger J.C.**, 2014, Ultra-Violet Observations for Atmospheric Correction of Coastal/Ocean Color Imagery, *Ocean Optics XXII 2014*, Portland, USA, 26-31 October 2014.

#### **Previous Conferences and Workshops in France:**

- 60 presentations in International Conferences
- 35 presentations in International Workshops
- 10 presentations in national conferences (in French)

#### **Recent Highlights:**

- Masek J., Vermote E., Franch B., **Roger J.C.**, Skakun S., Ju, J., Claverie M., and Dungan J., 2016, Harmonizing Landsat and Sentinel-2 Reflectance for better Land Monitoring, *NASA-Biosphere Web site*, July 2016.
- Skakun S., Franch B., Vermote E., **Roger J.C.**, Becker-Reshef I., Justice C., 2016, Early Season Large-area Winter Crop Mapping using MODIS NDVI data and Growing Degree Days Information, *NASA-Biosphere Web site*, Sept. 2016.
- Vermote E., et al, 2019, Eric Vermote and the Land Long Term Data Record Team from GEOG Awarded the NASA Robert H. Goddard Exceptional Achievement Award for Science, 2019.
- Franch B., Skakun S., **Roger J.C.**, Villaescusa-Nadal J.L., Santamaria-Artigas A., Vermote E., Masek J., and Ju J., 2019, GEOG researchers' manuscript selected as the March issue cover of the Remote Sensing journal, March 2019.
- Roger J.C.**, Vermote E., 2018, GEOG organized session at the JpGU 2018 Conference, June 2018
- Roger J.C.**, 2018, 2 PhD students from Geographical Sciences get financial support from NASA, April 2018.
- Skakun S., Franch B., **Roger J.C.**, and Hatfield H., 2018, GEOG Researchers Awarded a NASA Grant on Crop Yield Assessment with Remote Sensing Data, 2018.
- Roger J.C.**, and Pavlevan N., 2017, GEOG Researcher awarded grant from NASA, 2017
- Roger J.C.**, Skakun S., Franch B. and Justice C., 2017, GEOG researchers contribute to NASA Harmonized Landsat/Sentinel-2 (HLS) product, Nov. 2017.
- Skakun S., Justice C., Vermote E., **Roger J.C.**, 2017, UMD Professors Publish Paper in the International Journal of Remote Sensing, Nov 2017.
- Hurt G., et al., 2017, GEOG Researchers Honored at 19th Annual Research Leaders Luncheon, Oct. 2017.

**Roger J. C.**, Franch B., Justice C., and Vermote E., 2016, Toward a Consistent Land Long Term Climate Data Record from Large Field of View Polar Orbiting Earth Observation Satellites, *UMD department of geographical sciences web site*, September 2016.

**Roger J. C.**, Vermote E., Gascon F., and Doxani G., 2016, First ACIX-CEOS/WGCV international workshop, *UMD department of geographical sciences web site*, September 2016.

## TEACHING EXPERIENCE, MENTORING and ADVISING

### Courses Taught

Bachelor's degree (done in France – classroom = 20 or 40 students and amphitheater = 80 to 150 students)

- Geometrical Optics (year 1) - *40 or 150 students*
- Classical Mechanics (year 1) - *40 or 150 students*
- Electrostatic (year 1) - *150 students*
- Electrokinetic (year1) - *150 students*
- Magnetostatic (year1) - *150 students*
- Climatology (year 1) - *80 students*
- Electromagnetism (year 2) - *40 students*
- Astrophysics (year 2) - *20 students*
- Renewable energies (year 3) - *40 students*
- Electronics (years 1 and 2) - *40 students*
- Practical/Applied projects in Physics (years 1 and 2) - *20 students*
- Physical Optics (years 2 and 3) - *40 students*
- Thermodynamics (years 1, 2 and 3) – *40, 80 or 150 students*

Master's degree (done in France – classroom = 20, 40 or 60)

- Renewable Energies (year 1) - *40 students*
- Solar Energy (year 1) - *40 students*
- Atmospheric Fluid Dynamics (year1) - *40 students*
- Advanced Atmospheric Dynamic (year 2) - *40 students*
- Satellite Remote Sensing (years 1 and 2) - *40 or 60 students*
- Atmospheric Particles (years 1 and 2) - *20 students*
- Climatology (years 1 and 2) - *40 students*
- Atmospheric Radiative Transfer (years 1 and 2) - *20 students*

### Teaching Innovations

- |           |  |
|-----------|--|
| 2011-2014 | <b>PI and Director of the International Master of Sciences “Sound Engineering”</b> – University Blaise Pascal, France  |
| 2012-2014 | <b>PI of the University Diploma (3<sup>rd</sup> year) of “Sound Editing”</b> – University Blaise Pascal, France  |
| 2009-2011 | <b>Director of the Master of Physics and Chemistry of the Atmosphere and Climate</b> – University Blaise Pascal, France  |
| 2001-2005 | <b>PI and Director of the International Master of Sciences in “Expertise and Management of the Environment”</b> – University of the Littoral Opal Coast, France  |
| 2003-2005 | <b>PI of the International Master of Sciences in “Environmental Risk”</b> , The "Trans-Manche University" (University of the Littoral Opal Coast, University of Lille 1, University of Lille 2, University of Lille 3, and University of Kent), France and England |

### Research Advising

#### **Doctoral**

Actually, I am (Co-) Advisor for 2 PhD students:

José Luis Villaescuda Nadal – Started in 2016 at the University of Maryland – *Co-Advisor*

Andrès Santamaria Artigas – Started in 2015 at the University of Maryland – *Co-Advisor*

Previously, I was (Co-)Advisor for 7 PhD:

Bruno Korgo, “Aerosol Radiative budget in Burkina Faso”, PhD from the university of Ougadougou University – *Advisor* – Received on November 2014 in Ouagadougou, Burkina Faso.

Maxime Hervo, “Study of the Aerosol Radiative and Optical properties into a real atmosphere: impact of the hygroscopicity”, PhD of the University Blaise Pascal. Received on February 2013 – *Co-Advisor*

Benjamin Guinot, "Studies of the aerosols in Beijing", PhD of the University Paris 6. Received on April 2006 – *Co-Advisor*

Marc Mallet, "Impact of the physico-chemical properties of the atmospheric particles – Application to the ESCOMPTE experiment". PhD of the University of Toulon and Var. Received the 26<sup>th</sup> of January 2002 – *Advisor*

Nadège Martiny, "Validation of the atmospheric corrections for ocean colors and Geophysical interpretation of aerosols", PhD of the University "Littoral Côte d'Opale". Received on January 2002– *Co-Advisor*

Catherine Schmechtig, "Satellite Remote Sensing of aerosols from the MERIS instrument". PhD of the University "Littoral Côte d'Opale". Received the 06<sup>th</sup> of October 2000 – *Co-Advisor*

Catherine Six, "Automatic Ground-based measurements for satellite in-flight calibration". PhD of the University "Littoral Côte d'Opale". Received on July 2002 – *Co-Advisor*

Fabien Lahoche, "Use of multi-source, multi-scaled and multi-temporal data for estimating the hydrological parameters of a semi-arid area". PhD of the "Université du Littoral Côte d'Opale" and "INRIA – Paris". Received on December 2002– *Co-Advisor*

Recently, I served on dissertation committees for 2 PhD defenses:

José Luis Villaescuda Nadal, University of Maryland (May 1<sup>st</sup>, 2019)

Andrès Santamaria Artigas, University of Maryland (August 23<sup>rd</sup>, 2018)

Before 2014, I served on dissertation committees for 14 PhD defenses (3 as chair).

### **Master's**

Maxime Pinchaud (University of Perdue) “Seasonal approach for validation of surface reflectance over land”, 2016 – *Advisor*

Before 2014, I served as the Scientific Advisor of 10 students for their Master Research internship. I was also the Educational Advisor of 40 students for their Master Professional internship.

### **Other**

Chair of the committee defense of an “Habilitation to Direct Researches” (step beyond a PhD in France) – Cécile Coeur, University of the Littoral Opal Coast, France (June 14<sup>th</sup>, 2018)