PERSONAL INFORMATION

Daniele CASELLA

Via Fosso del Cavaliere,100, Rome, Italy (Work)

daniele.casella@isac.artov.cnr.it
danielecasella@pec.it

Sex Male| Date of birth 22/07/1979 | Nationality Italian

WORK EXPERIENCE

Dec. 2018– Today

Researcher

ISAC (Institute of Atmospheric Sciences and Climate)-CNR (National Research Council) , Via Fosso del Cavaliere 100, 00133 , Rome, Italy

- Retrieval of precipitation from space with particular focus on Sowfall
- Radiative transfer
- Snow Cover and Status

Dec. 2016 – Dec. 2018

Senior Radiometer Remote Sensing Expert

SERCO S.p.A, Via Sciadonna 24/26, 00044, Frascati, Italy
Remote Sensing Expert for services to the European Space Agency: ESA / ESRIN, Sensor Performance, Products and Algorithms Section, Earth Observation Mission Management Division / Ground Segment and Mission Operations, Department / Directorate of Earth Observation Programmes

- Quality Assessment of ERS scatterometer products
- Quality Assessment of ENVISAT altimetry products
- Validation of SMOS Sun observations
- Validation of Coastal altimetry products

Nov. 2014 – Nov. 2016

Researcher

ISAC (Institute of Atmospheric Sciences and Climate)-CNR (National Research Council) , Via Fosso del Cavaliere 100, 00133 , Rome, Italy

- PI of the project PNRA 2013 B.01: Characterization of precipitation in the Antarctic region based on satellite observations

Jul. 2014 – Oct. 2014

External Consultant

Compagnia Generale per lo Spazio CGS S.p.A., Via Gallarate, 150 20151 Milano (MI) - Italy

- Preliminary study on MWI geolocation function for supporting the definition of the pixel geolocation function of the ATBD for level 0-1b data processing algorithm

Jan. 2013 – Jul. 2014

Researcher

ISAC (Institute of Atmospheric Sciences and Climate)-CNR (National Research Council) , Via Fosso del Cavaliere 100, 00133 , Rome, Italy

- Precipitation retrieval from passive microwave radiometers on satellite. Development of MW Radiative transfer algorithms trough precipitating clouds. Cloud – Radiation Database generation.

May 2007 – Dec. 2012

Research Fellowship

ISAC (Institute of Atmospheric Sciences and Climate)-CNR (National Research Council) , Via Fosso del Cavaliere 100, 00133 , Rome, Italy

- Precipitation retrieval from passive microwave radiometers on satellite. Development of MW Radiative transfer algorithms trough precipitating clouds. Cloud – Radiation Database generation.

Jan. 2007 – May 2007

Contractor

ISAC (Institute of Atmospheric Sciences and Climate)-CNR (National Research Council) , Via Fosso del Cavaliere 100, 00133 , Rome, Italy

- Extension of the radiative transfer code to the SSMIS frequencies, generation of a Cloud-Radiation database using the radiative transfer code to case studies simulations..

EDUCATION AND TRAINING

November 2008 – May 2011

PhD degree at University of Rome La Sapienza

EQF Level 8

Department INFOCOM, Faculty of Engineering

- Remote sensing from satellite observations - Precipitation estimates. Passive microwave radiometers measurements. Implementation of Radiative transfer algorithms. Validation of precipitation products. Use of Cloud resolving Models. Development of retrieval algorithms.

  Tutors: prof..D. Fuà, A. Mugnai

  Thesis title: Analisi e verifica del metodo "Cloud Dinamics and Radiation Database" (CDRD) per la stima bayesiana della precipitazione con radiometri alle microonde montati su satellite

September 1998 - October 2006

Physics Degree at University of Rome La Sapienza

EQF Level 7

Università di Roma La Sapienza,Rome, Italy
Physics Department. P.le Aldo Moro 2, 00185, Rome – Italy
Physics of the earth, geomagnetism, meteorology, geophysics prospecting, seismology, remote sensing, MW-radiative transfer.
Vote: 110/110. Thesis: "*Microwave single-scattering properties of randomly oriented soft-ice hydrometeors and remote sensing applications" conducted at National Research Institute in Rome (CNR).*Tutors: Prof. G. Fiocco, A. Mugnai

September 1993 - July 1998

High School Degree

EQF Level 4

Liceo Classico "Cornelio Tacito". Via Sebastiano Vinci 1, 00195 – Rome – Italy
Italian, Latin and Greek literature and languages, history, philosophy, and other.
Vote: 60/60

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Independent user	Proficient user

Levels: Basic user - Independent user - Proficient user
Digital competences - Self-assessment grid

- Computer -Programming experience:
- Expert in Matlab , Python, Fortran
- Good knowledge of OS Linux, Windows and Microsoft Office tools
- Good knowledge of Bash scripting
- Knowledge of C, R, IDL,
- Knowledge of PostgreSQL, MySQL database
- User of tools for visualization and analysis of meteorological and satellite data: GrADS, Vis5D, GMT

Driving licence: Category: B

Selected Publications in:
Scientific Journals
Books Chapters

1. Panegrossi, G., Marra, A. C., Sanò, P., Baldini, L., **Casella, D**., & Porcù, F. (2020). Heavy precipitation systems in the Mediterranean area: The role of GPM. In *Satellite Precipitation Measurement* (pp. 819-841). Springer, Cham.

2. Rysman, J. F., Panegrossi, G., Sanò, P., Marra, A. C., Dietrich, S., Milani, L., Kulie, M.S, **Casella, D.**, Camplani, A. Claud, C., Edel, L. (2019). Retrieving surface snowfall with the GPM Microwave Imager: A new module for the SLALOM algorithm. *Geophysical Research Letters*, *46*(22), 13593-13601.

3. Marra, A. C., Federico, S., Montopoli, M., Avolio, E., Baldini, L., **Casella, D.**, D'Adderio, L.P., Dietrich, S., Sanò, P., Torcasio R.C., Panegrossi, G. (2019). The Precipitation Structure of the Mediterranean Tropical-Like Cyclone Numa: Analysis of GPM Observations and Numerical Weather Prediction Model Simulations. *Remote Sensing*, *11*(14), 1690.

4. Sanò, P., Panegrossi, G., **Casella, D**., Marra, A., D'Adderio, L., Rysman, J., & Dietrich, S. (2018). The Passive Microwave Neural Network Precipitation Retrieval (PNPR) Algorithm for the CONICAL Scanning Global Microwave Imager (GMI) Radiometer. Remote Sensing, 10, 1122.

5. Milani, L., Kulie, M.S., **Casella, D**., Dietrich, S., L'Ecuyer, T.S., Panegrossi, G., Porcù, F., Sanò, P., Wood, N.B.; CloudSat snowfall estimates over Antarctica and the Southern Ocean: An assessment of independent retrieval methodologies and multi-year snowfall analysis; (2018) Atmospheric Research, 213, pp. 121-135. DOI: 10.1016/j.atmosres.2018.05.015

6. Derin Y, Anagnostou E, Anagnostou MN, Kalogiros J**, Casella D**, Marra AC, Panegrossi G, Sano P. Passive microwave rainfall error analysis using high-resolution x-band dual-polarization radar observations in complex terrain. IEEE Transactions on Geoscience and Remote Sensing 56.5 (2018): 2565-2586

7. **Casella D**., Panegrossi G., Sanò P., Marra A.C., Dietrich S., Johnson B. T., Kulie M.S. Evaluation of the GPM-DPR Snowfall Detection Capability: Comparison with CloudSat-CPR. Atm. Res., 2017,197,64-75, doi: 10.1016/j.atmosres.2017.06.018

8. **Casella D**., Amaral L., Dietrich S., Marra A.C., Sanò P. and Panegrossi G. The Cloud Dynamics and Radiation Database algorithm for AMSR2: exploitation of the GPM observational dataset for operational applications. JSTARS, 2017,10 (8) doi: 10.1109/JSTARS.2017.2713485

9. Marra A.C,. Porcù F, Baldini L., Petracca M., **Casella D.**, Dietrich S., Mugnai A., Sanò P., Vulpiani G., and Panegrossi G.. Observational analysis of an exceptionally intense hailstorm over the Mediterranean area: Role of the GPM Core Observatory. Atm. Res., 2017, 192, 72-90, http://doi.org/10.1016/j.atmosres.2017.03.019

10. Federico S., Torcasio R. C., Sanò P., **Casella D.**, Campanelli M., Meirink J. F., Wang P., Vergari S., Diémoz H., and Dietrich S.. Comparison of hourly surface downwelling solar radiation estimated from MSG/SEVIRI and forecast by RAMS model with pyranometers over Italy. Atmos. Meas. Tech., 2017 10, 2337-2353, doi:10.5194/amt-10-2337-2017

11. Ursi, A., Sanò, P., **Casella, D.,** Marisaldi, M., Dietrich, S., Tavani, M. (2017). A pipeline to link meteorological information and TGFs detected by AGILE. Journal of Geophysical Research: Space Physics 122.2 (2017): 2300-2309.

12. Ciabatta L., Marra A. C., Panegrossi G., **Casella D.,** Sanò P., Dietrich S., Massari C., Brocca L., Daily precipitation estimation through different microwave sensors: Verification study over Italy. Journal of Hydrology, 2017, 545, 436-450, doi: 10.1016/j.jhydrol.2016.12.057. **IF 2015:3.043**

13. Sanò, P., Panegrossi, G., **Casella, D**., Marra, A. C., Di Paola, F., and Dietrich, S.: The new Passive microwave Neural network Precipitation Retrieval (PNPR) algorithm for the cross-track scanning ATMS radiometer: description and verification study over Europe and Africa using GPM and TRMM spaceborne radars, Atmos. Meas. Tech., 9.11 (2016): 5441-5460. doi: :10.5194/amt-9-5441-2016, 2016.

14. Panegrossi G**., Casella D**., Dietrich S., Marra A.C., Sanò P., Mugnai A., Baldini L., Roberto N., Adirosi E., Cremonini R., Bechini R., Vulpiani G., Petracca M., and Porcù F.: Use of the GPM Constellation for Monitoring Heavy Precipitation Events Over the Mediterranean Region. IEEE JSTARS, 9.6 (2016): 27433-2753 doi: 10.1109/JSTARS.2016.2520660, 2016.

15. Ursi, A., Marisaldi, M., Tavani, M., **Casella, D**., Sanò, P., Dietrich, S.. Detection of multiple terrestrial gamma-ray flashes from thunderstorm systems. Journal of Geophysical Research: Space Physics, 121 (11), pp. 11,302-11,315. 2016. doi: 10.1002/2016JA023136

16. Roberto, N., Adirosi, E., Baldini, L., **Casella, D.**, Dietrich, S., Gatlin, P., Panegrossi, G., Petracca, M., Sanò, P., and Tokay, A.: Multi-sensor analysis of convective activity in central Italy during the HyMeX SOP 1.1, Atmos. Meas. Tech., 9, 535-552, doi:10.5194/amt-9-535-2016, 2016

17. **Casella, D**., Panegrossi, G., Sanò, P., Milani, L., Petracca, M., and Dietrich, S.: A novel algorithm for detection of precipitation in tropical regions using PMW radiometers, Atmos. Meas. Tech., 8, 1217-1232, doi:10.5194/amt-8-1217-2015, 2015

18. Sanò, P., Panegrossi, G., **Casella, D.**, Di Paola, F., Milani, L., Mugnai, A., Dietrich, S.. The Passive microwave Neural network Precipitation Retrieval (PNPR) algorithm for AMSU/MHS observations: description and application to European case studies. *Atmos. Meas. Tech*., 8, 837-857, 2015, doi:10.5194/amt-8-837-2015

19. Milani, L., Porcù, F., **Casella, D.**, Dietrich, S., Panegrossi, G., Petracca, M., and Sanò, P.: Analysis of long-term precipitation pattern over Antarctica derived from satellite-borne radar, The Cryosphere Discuss., 9, 141-182, doi:10.5194/tcd-9-141-2015, 2015. **Open Discussion**

20. Federico, S., Avolio, E., Petracca, M., Panegrossi, G., Sanò, P., **Casella, D.**, Dietrich, S. Simulating lightning into the RAMS model: Implementation and preliminary results. *Nat.. Hazards Earth Syst. Sci*., **14** (11) pp. 2933 - 2950 . 2014.

21. Puca, S., Porcu, F., Rinollo, A., Vulpiani, G., Baguis, P., Balabanova, S., Campione, E., Ertürk, A., Gabellani, S., Iwanski, R., Jurašek, M., Kaňák, J., Kerényi, J., Koshinchanov, G., Kozinarova, G., Krahe, P., Lapeta, B., Lábó, E., Milani, L., Okon, L'., Öztopal, A., Pagliara, P., Pignone, F., Rachimow, C., Rebora, N., Roulin, E., Sönmez, I., Toniazzo, A., Biron, D., **Casella, D**., Cattani, E., Dietrich, S., Di Paola, F., Laviola, S., Levizzani, V., Melfi, D., Mugnai, A., Panegrossi, G., Petracca, M., Sanò, P., Zauli, F., Rosci, P., De Leonibus, L., Agosta, E., and Gattari, F.: The validation service of the hydrological SAF geostationary and polar satellite precipitation products, *Nat. Hazards Earth Syst. Sci*., 14, 871-889, doi:10.5194/nhess-14-871-2014, 2014.

22. Mugnai A., **Casella D.**, E. Cattani, S. Dietrich, S. Laviola, V. Levizzani, G. Panegrossi, M. Petracca, P. Sanò, F. Di Paola, D. Biron, L. De Leonibus, D. Melfi, P. Rosci, A. Vocino, F. Zauli, S. Puca, A. Rinollo, L. Milani, F. Porcù, and F. Gattari. Precipitation Products from the Hydrology SAF. *Nat. Hazards Earth Syst. Sci,* 13, 1959-1981, 2013, doi:10.5194/nhess-13-1959-2013

23. Mugnai A., E. A. Smith, G. J. Tripoli, B. Bizzarri, **D. Casella**, S. Dietrich, F. Di Paola, G. Panegrossi, P. Sanò. CDRD and PNPR Satellite Passive Microwave Precipitation Retrieval Algorithms: EuroTRMM / EURAINSAT Origins and H-SAF Operations. *Nat. Hazards Earth Syst. Sci*, 13, 887–912, 2013 doi:10.5194/nhess-13-887-2013.

24. Smith E.A., H. W.-Y. Leung, J.B. Elsner, A.V. Mehta, G.J. Tripoli, **D. Casella**, S. Dietrich, A. Mugnai, G. Panegrossi and P. Sanò. Transitioning from CRD to CDRD in Bayesian Retrieval of Rainfall from Satellite Passive Microwave Measurements: Part 3. Identification of Optimal Meteorological Tags. *Nat. Hazards Earth Syst. Sci*, 13, 1185–1208, 2013, doi:10.5194/nhess-13-1185-2013.

25. Formenton, M., Panegrossi, G., **Casella, D.**, Dietrich, S., Mugnai, A., Sanò, P., Di Paola, F., Betz, H.-D., Price, C., and Yair, Y.: Using a cloud electrification model to study relationships between lightning activity and cloud microphysical structure, *Nat. Hazards Earth Syst. Sci.*, 13, 1085-1104, doi:10.5194/nhess-13-1085-2013, 2013.

26. **Casella D.**, G. Panegrossi, P. Sanò, A. Mugnai, E. A. Smith, G.J. Tripoli, S. Dietrich, M. Formenton, W.Y. Leung, A. Mehta, Transitioning from CRD to CDRD in Bayesian Retrieval of Rainfall from Satellite Passive Microwave Measurements: Part 2. Overcoming Database Profile Selection Ambiguity by Consideration of Meteorological Control on Microphysics. *IEEE Trans. Geo. Rem. Sens*., vol.51, no.9, 4650-4671, 2013 doi: 10.1109/TGRS.2013.2258161

27. Sanò P., **D. Casella**, A. Mugnai, G. Schiavon, E.A. Smith, G.J. Tripoli, Transitioning from CRD to CDRD in Bayesian Retrieval of Rainfall from Satellite Passive Microwave Measurements: Part 1. Algorithm Description and Testing. *IEEE Trans. Geo. Rem. Sens*., vol. 51, no. 7, 4119-4143, july

2013, doi: 10.1109/TGRS.2012.2227332

28. Di Paola F., **D. Casella**, S. Dietrich, A. Mugnai, E. Ricciardelli, F. Romano, P. Sanò, Combined MW-IR Precipitation Evolving Technique (PET) of convective rainfields. *Nat. Hazards Earth Syst. Sci*, 3557–3570, doi:10.5194/nhess-12-3557-2012, 2/12. 2012
29. **Casella D.**, S. Dietrich, F. Di Paola, M. Formenton, A. Mugnai, F. Porcù, and P. Sanò, PM-GCD A combined IR–MW satellite technique for frequent retrieval of heavy precipitation. *Nat. Hazards Earth Syst. Sci*., 12, 231–240, doi:10.5194/nhess-12-231-2012, 2012
30. Dietrich, S., **Casella, D.**, Di Paola, F., Formenton, M., Mugnai, A., and Sanò, P.: Lightning-based propagation of convective rain fields, *Nat. Hazards Earth Syst. Sci*., 11, 1571-1581, doi:10.5194/nhess-11-1571-2011, 2011
31. **Casella D.**, Mugnai A, Sano P, Formenton M.: Microwave single-scattering properties of randomly oriented soft-ice hydrometeors. *Adv. Geosci*., 17; 79-85, ISSN: 1680-7340, 2008

Proceedings

1. Crapolicchio R., Casella D., Marqué C.; Solar Radio Observations From Soil Moisture And Ocean Salinity (Smos) Mission; 2018 IEEE Proc. IGARSS, 22-27 July, Valencia, Spain, 2018
2. Panegrossi G., Rysman J-F, Casella D., Sanò P., Marra A.C., Dietrich S., Kulie M.S.; Exploitation Of Gpm/Cloudsat Coincidence Dataset For Global Snowfall Retrieval; 2018 IEEE Proc. IGARSS, 22-27 July, Valencia, Spain, 2018
3. Sanó P., Panegrossi G., Casella D., Marra A.C., Martins Costa do Amaral L., Dietrich S.; The Passive Microwave Neural Network Precipitation Retrieval (PNPR) for the Conical Scanning GMI Radiometer: description and application to case studies; 2017 Eumetsat meteorological satellite conference, 2-6 October, Rome 2017
4. G. Panegrossi, D. Casella, S. Dietrich, A.C. Marra, L. Martins Costa do Amaral, P. Sanò: The new Bayesian algorithms for AMSR2 and GMI; 2017 Eumetsat meteorological satellite conference, 2-6 October, Rome 2017
5. Marra A. C., Panegrossi G., Sano P., Dietrich S., Casella D., Ciabatta L., Massari C., Brocca L.: Verification study of MW-based gridded daily precipitation estimates: perspectives for the future development of H-SAF H23 product; 2017 Eumetsat meteorological satellite conference, 2-6 October, Rome 2017
6. Pinori S., Casella D., Di Ciolo L., Dhen A., Crapolicchio R.: Ers-1 Scatterometer Data (1991-1996): New Esa-Asps Reprocessing Data Monitoring; 2017 Eumetsat meteorological satellite conference, 2-6 October, Rome 2017

Principal Investigator of funded projects

2014-2016 **PNRA PDR 2013 B3.01 "Characterization of precipitation in the Antarctic region based on satellite observations"**
Objectives:
methodology for the characterization of the different types of precipitation in the Antarctic region based on active and passive satellite measurements
PI of the project
Partners: MIUR, PNRA, CNR-ISAC, CNR-IMAA, Ferrara University

2015 **Programma CNR - Short Term Mobility 2015**
Objectives:
Short term visit to SSEC for the analysis of coincident satellite observations of active and passive MW sensors for the characterization of snowfall at high latitudes.
PI of the project
Partners: CNR-ISAC, CIMSS-SSEC (University of Wisconsin, Madison)

Responsibilities in National/International Projects

2019-2020 **Raincast. ESA ITT: AO/1-9324/18/NL/NA**
Objectives: multi-platform and multi-sensor study to address the requirement from the research and operational communities for global precipitation measurements.
Responsibilities: Collaboration on WP 3200: evaluation of CloudSat/GPM co-located dataset
Partners: ESA, Univ. of Leicester, CNR-ISAC, Mc.Gill Univ.

2019-2020 **GAMES: Geolocation Assessment/validation Methods for EPS-SG ICI and MWI. EUMETSAT ITT 19/218140**
Objectives: development and verification of methods for the estimate of the geolocation error for the ICI radiometer which channels are subject to strong atmospheric absorption
Responsibilities: Contributor to WP2: Atmospheric targets assessment methods:
- study on Deep Convective Clouds and Water Vapor Features to be used as targets for geolocation
Partners: Eumetsat, La Sapienza Univ., ISAC-CNR, Moflow.

2019 **Collaboration Agreement between CNR-ISAC and Serco in the frame of the IDEAS+ project**
Objectives: Completing the studies on SMOS Sun brightness temperature and Coastal Altimetry-derived Currents
Responsibilities: Responsible from ISAC-CNR side
Partners: ISAC-CNR, Serco.

2018 **Instrument Data Quality Evaluation and Analysis Service group (IDEAS+) of Serco for SMOS Sun**
Objectives: quality control for ESA od the Sun BT observations of SMOS.
Responsibilities:.
Under the coordination of R. Crapolicchio:
- Generation of radiotelescope inter-calibrated L-band Sun flux reference dataset.
- Correction of SMOS Sun brightness temperature in order to align SMOS estimation with best radiotelescope inter-calibrated data set.
- Validation of SMOS SUN brightness temperature with radiotelescope data.
Partners: Telespazio, Serco, Rhea, NPL, EOSense,..

2018 **Instrument Data Quality Evaluation and Analysis Service group (IDEAS+) of Serco for Coastal Altimetry**
Objectives: Geophysical validation of the Northern Current intrusions observations with altimetric data.
Responsibilities:.
Under the coordination of M. Meloni and J. Bouffard:
- Assessment of the capability of altimetric-derived current near coast of observing localized current intrusions into the gulf of Lion.
- Comparison with in situ radar measurements (Julio Current-meter)
- Comparison with extended dataset of small scale simulations
Partners: Telespazio, Serco, Rhea, NPL, EOSense, Mediterranean Institute of Oceanography.

: 2017 **Instrument Data Quality Evaluation and Analysis Service group (IDEAS+) of Serco for ERS and ENVISAT RA/RA2, MWR and AMI-SCAT**
Objectives: operational quality control for ESA. IDEAS is a VEGA-led consortium of internationally recognised experts in the field of EO quality control.
Responsibilities:.
- Quality Working group and Cal/Val support
- Quality Tool and processor operation
- Instrument/processor anomaly investigation
- PDGS and SW developer engineering support
- SW development (matlab,IDL, bash scripting, python)
- User service support
- Documentation generation and review
Partners: Telespazio, Serco, Rhea, NPL, EOSense,..

2015-2016 **Federated activity on Cooperation on the use of combined spaceborne active and passive MW observations for precipitation retrieval**
Objectives:
Prepare and exploit datasets from coincident overpasses of spaceborne precipitation radars and PMW radiometers for the refinement and development of precipitation retrieval techniques with focus on light precipitation and snowfall.

Responsibilities: Specific studies on passive microwave and radar observations from space related to snowfall and light precipitation.
Partners : H-SAF / UW-SSEC / UMBC-JCET

2014-2016 **MWI- CNR-ISAC Support to GPP – MWI Level 1B**
Objectives:
specify the Algorithm Theoretical Baseline (ATBD) for the Level 1B Ground Processor Prototype (GPP) of the MWI radiomerer.
Responsibilities: Responsible for the definition of the MWI geolocation function and for the review of the Algorithm Theoretical Baseline Document.
References: Doc n. MOS-TN-CGS-MWI-0031
Partners : ESA, OHB-CGS, CNR-ISAC, CLS

2005 -2016 **Project: "EUMETSAT *Satellite Application Facility on Support to Operational Hydrology and Water Management"* (H-SAF)"**, hosted by Italian Meteorological Service.
Objectives:
-Provide new satellite-derived products from existing and future satellites with sufficient time and space resolution to satisfy the needs of operational hydrology;
- Perform independent validation of the usefulness of the new products for fighting against floods, landslides, avalanches, and evaluating water resources.
Responsibilities: Responsible for the development and documentation of PR-OBS-01 product: "Precipitation rate at ground by MW concal scanners".
Reference: H-SAF/RR/DOC.1 3 Aprile 2016 "H-SAF Project Plan"
Partners: EUMETSAT, Italian Air Force Meteorological Service, Civil Protection, Zentralanstalt für Meteorologie und Geodynamik, Finnish Meteorological Institute, European Centre for Medium-Range Weather Forecasts, Turkish State Meteorological Service, Institute of Meteorology and Water Management, Italian Institute of Atmospheric Sciences and Climate, ELSAG DATAMAT, Országos Meteorológiai Szolgálat, Météo-France, Royal Meteorological Institute of Belgium, Slovenský hydrometeorologický ústav, TuWien / IPF, German Federal Institute of Hydrology, Aalto University School of Science and Technology, Meteo Romania, Anadolu University, Ferrara University, Istanbul Technical University, Finnish Environment Institute, Centre national de la recherche scientifique

Service

Teaching Activities
27/07-05/08 2010 Lecturer at the ESA Summer School Alpbach 2010: *Remote sensing of Clouds and Precipitation from Space*
14-18/07 2014 Lecturer at the EUMETSAT International Remote Sensing School for Hydrological Applications 2014: *Precipitation Product Application for Severe Events Monitoring*

03/2016 Member of the organizing Committeeof the IVSkynet international Workshop

Peer reviewer for:
Atmospheric Research. Journal of Applied Meteorology and Climatology, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, IEEE Transactions on geosciences and Remote Sensing, Journal of Atmospheric and Solar-Terrestrial Physics, Nat. Hazards Earth Syst. Sci, Atmospheric Research

Conferences (2017-2018) Participation to more than 50 international conferences

Turk F.J., P. Partain, E. Stocker, S. Ringerud, G. Liu, M. Yin, A. Battaglia, G. Panegrossi, D. Casella, M. Kulie, B. Johnson, 2017. Extending GPM Precipitation Science from Coincident CloudSat-GPM Observations. A-Train Symposium 2017, 19-21 April 2017. Pasadena, US.

Marra A.C., Casella D., Costa do Amaral L.M., Sanò P., Dietrich S, Panegrossi G., The new Cloud Dynamics and Radiation Database algorithms for AMSR2 and GMI: Exploitation of the GPM observational database for operational applications. EGU General Assembly 23-28 April 2017, Vienna, Austria.

Panegrossi G., Casella D., Sanò P, Marra A.C., Dietrich S., Kulie M.S., Johnson B.T., Global spaceborne snowfall retrieval detection assessment using coincident radar and radiometer observations from GPM, ATMS, and CloudSat. EGU General Assembly 23-28 April 2017, Vienna, Austria.

Panegrossi G., Casella D., Dietrich S., Marra A. C., Rysman J. F., Sanò P., Kulie M. S., Johnson B. T, Use of coincident radar and radiometer observations from GPM and CloudSat for global spaceborne snowfall observation assessment. 1st International Summer Snowfall Workshop, 28-30 June 2017, Colonia, Germany

A.C. Marra, F. Porcù, L. Baldini, M. Petracca, D. Casella, S. Dietrich, A. Mugnai, P. Sanò, G. Vulpiani, G. Panegrossi, : Osservazioni da radar a terra e su piattaforma satellitare di un evento di grandine nel Golfo di Napoli. al II Convegno Nazionale di Radarmeteorologia, 3-4 July 2017, Roma Italy.

Panegrossi G., S. Dietrich, A. C. Marra, P. Sanò, D. Casella, L. Baldini, A. Mugnai, G. Vulpiani, M. Petracca, F. Porcù, Role and capabilities of the GPM mission in the characterization and monitoring of extreme precipitation events in the Mediterranean region. 10th Hymex Workshop, 4-7 July 2017, Barcellona, Spain.

Panegrossi G., A. C. Marra, P. Sanò, S. Dietrich, D. Casella, L. Ciabatta, C. Massari, L. Brocca, Verification study of microwave-based gridded daily precipitation estimates: perspectives for the future development of H-SAF H23 product. EUMETSAT Meteorological Satellite Conference 2017, 2-6 October, Rome Italy

Sanò P., G. Panegrossi, D. Casella, A. C. Marra, L. Amaral, S. Dietrich, The Passive Microwave Neural Network Precipitation Retrieval (PNPR) for the Conical Scanning GMI Radiometer: description and application to case studies. EUMETSAT Meteorological Satellite Conference 2017, 2-6 October, Rome Italy

Marra A. C., D. Casella, L. M. Amaral, P. Sanò, S. Dietrich, and G. Panegrossi, The new Cloud Dynamics and Radiation Database algorithms for AMSR2 and GMI: exploitation of the GPM observational database for operational applications. EUMETSAT Meteorological Satellite Conference 2017, 2-6 October, Rome Italy.

Panegrossi G., P. Sanò, A. C. Marra, D. Casella, S. Dietrich, B. Johnson, M. S. Kulie, Passive Microwave Precipitation products in H-SAF: recent developments and related activities within the collaboration with GPM. EUMETSAT Meteorological Satellite Conference 2017, 2-6 October, Rome Italy.

Panegrossi G., P. Sanò, A. C. Marra, J.-F. Rysman, D. Casella, S. Dietrich, B. Johnson, M. Kulie, HSAF-GPM collaboration activity: assessment of GMI snowfall detection capabilities based on synergistic CloudSat observations (and the new PNPR for GMI). PMM Science Team Meeting 2017, San Diego, CA, 16-20 October 2017

Sanò P., Panegrossi G., Casella D., A.C., Rysman J.F., Dietrich S., Design and Performances of the Passive Microwave Neural Network Precipitation Retrieval (PNPR) Algorithm for the Conical Scanning GMI Radiometer. EGU General Assembly 2018. Vienna, Austria, 9-13 April 2018

J. F. Rysman, A. C. Marra, G. Panegrossi, P. Sanò, L. P. D'Adderio, S. Dietrich, D. Casella, Exploitation of GPM/CloudSat coincidence dataset for global snowfall retrieval. IGARSS 2018, Valencia, Spain, 22-27 July 2018

Meloni M., Bouffard J., Doglioli A., Petrenko A., Valladeau G. and Casella D. Toward new validation concept for high-resolution and coastal altimetry. 25 years of progress in Coastal Altimetry, 24-27 September2018, Porta Delgada, Portugal

D. Casella, L. Di Ciolo, S. Pinori, ESA ERS Scatterometer dataset: first steps in metrological approach to 20 years of data. EUMETSAT Meteorological Satellite Conference 2018, 17 - 21 September 2018 Tallinn, Estonia.