Curriculum Vitae

Pierre-Emmanuel KIRSTETTER, Ph.D.

Research Scientist

Advanced Radar Research Center / National Severe Storms Laboratory
National Weather Center (NWC)
120 David L. Boren Blvd, Rm. 4706
Norman OK 73072

Email: pierre.kirstetter@noaa.gov
Phone: +1 405 325 6092
Fax: +1 405 325 1774

Education

2005-2008 **Ph.D. degree in Hydrometeorology**
UJF - Joseph Fourier University, Grenoble, France
LTHE - Laboratoire d'etude des Transferts en Hydrologie et Environement, Grenoble, France
Scientific advisors: Guy Delrieu and Herve Andrieu
Subject: radar quantitative precipitation estimation: inference of the vertical profile of reflectivity, radar-raingauge error model.

2004-2005 **M.S. degree in Environmental Sciences**
UJF, Grenoble, France
LTHE, Grenoble, France
Scientific supervisor: Guy Delrieu
Subject: radar and raingauges data analysis, hydrological modeling.

2001-2004 **Master's degree in Engineering**
ENSHMG - Ecole Nationale Supérieure d'Hydraulique et de Mécanique of Grenoble (Civil Engineering and Environmental Science), Grenoble, France

June 2006: Summer school on multidisciplinary approaches for flash flood monitoring.

Research Interests

- Radar and satellite (passive and active) remote sensing of precipitations (measurement physics, data processing for microphysics, modeling).
- Developing methods to improve quantitative precipitation estimates and assess rainfall uncertainties.
- Evaluating impact of quantitative precipitation estimation algorithms in hydrologic model simulations.
- Flood climatologies

- Related topics: social impact of flash floods, regional climate models.
- Applied mathematics – Statistics – Geostatistics – Hydrometeorology.

Professional experience

2014 – **Research Scientist**
ARRC – Advanced Radar Research Center /
HyDROS – Hydrometeorology and Remote Sensing Laboratory /
OU – University of Oklahoma, Norman, OK, USA NOAA/
NSSL – National Severe Storms Laboratory, Norman, OK, USA

2011- **Postdoctoral Research Scientist**
HyDROS / ARRC / OU / NOAA/NSSL
Project: NASA Global Precipitation Measurement mission Ground Validation (GPM-GV) Program - Evaluation of NASA's satellite precipitation products.

2010-2011 **Research scientist**
INPE - Instituto Nacional de Pesquisas Espaciais /
CPTEC - Centro de Previsão de Tempo e Estudos Climáticos, Cachoeira Paulista, SP, Brazil
Project: CHUVA - Rain microphysics observation with radar.

2008-2010 **Postdoctoral Research Scientist**
LATMOS - Laboratoire Atmospheres, Milieux, Observations Spatiales, Paris, France
Project: Megha-Tropiques - Evaluation of satellite ground / vertical profiles rainfall estimates over West Africa.

Honors, Awards and Fellowships

2015 NASA Robert H. Goddard Award – category of Exceptional Achievement in Science for contributing to the Global Precipitation Measurement algorithm teams (Radar, Radiometer, Combined, and Merged)

2015 NASA Robert H. Goddard Award – category of Exceptional Achievement in Science for contributing to the Global Precipitation Measurement Ground Validation Team

2014 NASA Precipitation Measurement Missions Science Team Award 2014

2013-current Member of the NASA Precipitation Measurement Missions (PMM) Science Team

2011-2013 NASA Headquarter/GSFC Global Precipitation Ground Validation (GPM-GV) post-doctoral Fellowship, USA

2010-2011 INPE post-doctoral Fellowship, Instituto Nacional de Pesquisas Espaciais, Brazil

2008-2010 CNES post-doctoral Fellowship, Centre National d'Etudes Spatiales, France

2004-2008 Doctoral Fellowship Recipient, Bourse de Docteur-Ingenieur of the Centre National de la Recherche Scientifique (CNRS), France

Funded projects

- **Title:** Deployment of a Novel Solid-state Polarimetric Weather Radar for Hydrology.
  Effort: Principal Investigator.
  Source of support: State of Colorado, US.
  Award Period: [09/01/2014 – 10/15/2014]
- **Title**: Real-time Evaluation of NASA's Global Precipitation Measurement Mission Products.
  Effort: Science Principal Investigator (*) with PI Dr. Y. Hong.
  Source of support: NASA Global Precipitation Measurement mission Ground Validation (GPM-GV) Program.
  Award Period: [06/01/2014 – 05/31/2015]
- **Title**: Using National Mosaic QPE (NMQ) Ground-Based Radar to Improve Passive-Only Precipitation Profile Retrievals for the Precipitation and All Weather Temperature and Humidity (PATH) mission.
  Effort: Science Principal Investigator (*) with PI Dr. Y. Hong.
  Source of support: NASA ROSES WEATHER.
  Award Period: [09/01/2013 – 08/31/2016]
- **Title:** Comprehensive Evaluation of NASA's Satellite Precipitation Products using National Mosaic Quantitative Precipitation Estimation.
  Effort: co-Principal Investigator Researcher.
  Source of support: NASA Global Precipitation Measurement mission Ground Validation (GPM-GV) Program.
  Award Period: [06/01/2013 – 31/05/2014]
- **Title:** A Research Framework to Bridge GPM Core and Constellation Sensors using Polarimetric National Mosaic QPE (NMQ)
  Effort: Science Principal Investigator (*) with PI Dr. Y. Hong.
  Source of support: NASA ROSES Precipitation Measurement Missions Science Team-2012.
  Award Period: [03/01/2013 – 03/01/2016]
- **Title:** Use of GV data to evaluate and improve uses of satellite-rainfall in hydrologic modeling of complex terrain basin floods.
  Effort: Collaborator with PI Dr. E. Anagnostou.
  Source of support: NASA ROSES Precipitation Measurement Missions Science Team-2012.
  Award Period: [03/01/2013 – 03/01/2016]
- **Title:** Linking NASA Multiple Satellite Missions with Oklahoma Ground Observations: Impact of Land Surface Soil Moisture on Cloud Structure and Precipitation.
  Source of support: Oklahoma NASA Space Grant Consortium/ NASA EPSCoR.
  Travel Award: [01/01/2013]

• **Title:** In-depth evaluation of NASA's Global precipitation products using National Mosaic Quantitative Precipitation Estimation.
Effort: co-Principal Investigator Researcher.
Source of support: NASA Global Precipitation Measurement mission Ground Validation (GPM-GV) Program.
Award Period: [04/01/2012 – 03/01/2013]

(*) "Science PI" applies for unique circumstances where the proposing organization does not permit an individual to formally serve as a PI (e.g., nontenured faculty or postdoctoral personnel). In such a case, that Co-I/Science PI will be understood by NASA to be in charge of the scientific direction of the proposed work, although the formally designated PI will still be held responsible for the overall direction of the effort and use of funds (from the Guidebook for proposers responding to a NASA research announcement (NRA) or cooperative agreement notice (CAN), ed. 2012 & 2013).

Scientific Collaborations

- **GPM** - Global Precipitation Measurement
  http://pmm.nasa.gov/GPM
- **TRMM** - Tropical Rainfall Measuring Mission
  http://trmm.gsfc.nasa.gov/
- **FLASH** – Flooded Locations and Simulated Hydrographs Project
  http://www.nssl.noaa.gov/projects/flash/
- **IPHEx** – Integrated Precipitation and Hydrology Experiment
  http://pmm.nasa.gov/node/1085
- **HyMex** - Hydrological cycle in the Mediterranean eXperiment
  http://www.hymex.org
- **Megha-Tropiques**
  http://meghatropiques.ipsl.polytechnique.fr/
- **CHUVA** - Cloud processes of the main precipitation systems in Brazil: a contribution to cloud resolving modeling and to the GPM
  http://chuvaproject.cptec.inpe.br/portal/en/index.html
- **AMMA** - African Monsoon Multidisciplinary Analyses
  http://www.amma-international.org/spip.php?rubrique1
- **OHMCV** - Cevennes-Vivarais Mediterranean Hydrometeorological Observatory
  http://www.ohmcv.fr/?lang=en

Professional societies

- Member, **American Meteorological Society (AMS)**, 2014-present
- Member, **American Geophysical Union Precipitation Committee**, 2013-present
- Member, **World Meteorological Agency's International Precipitation Working Group (IPWG)**, 2013-present
- Member, **American Geophysical Union (AGU)**, 2012-present

Editorial/Review Activities

Proposal reviewer for:

- *Swiss National Science Foundation*

- *Natural Environment Research Council of the United Kingdom*
- *American Association for the Advancement of Science*

Article reviewer for:

- *Advances in Meteorology*
- *Atmospheric Research*
- *Bulletin of the American Meteorological Society*
- *CATENA*
- *Hydrology and Earth System Sciences*
- *Hydrological Processes*
- *Hydrology Research*
- *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*
- *Journal of Applied Meteorology and Climatology*
- *Journal of Atmospheric and Oceanic Technology*
- *Journal of the Atmospheric Sciences*
- *Journal of Geophysical Research – Atmospheres*
- *Journal of Hydroinformatics*
- *Journal of Hydrologic Engineering*
- *Journal of Hydrology*
- *Journal of Hydrometeorology*
- *Journal of Quantitative Spectroscopy and Radiative Transfer*
- *Meteorology and Atmospheric Physics*
- *Progress in Physical Geography*
- *Water Resources Research*

Educational Outreach and External Service

- General Chair of the Organizing Committee for the 4th International Symposium on Earth-science Challenges (ISEC 2015), Norman, OK, U.S., Sept. 20-22, 2015.

- Outstanding Student Paper Awards Judge for the Global Precipitation Measurement sessions (H11L, H12C, H13B, H23P and H24C) at the AGU Fall meeting 2014, San Francisco, CA, U.S., Dec. 15-19, 2014.

- Convener of AGU Fall Meeting 2014 session titled: “H24C. Global Precipitation Measurement, Validation, and Applications V”, San Francisco, CA, U.S., Dec. 15-19, 2014.

- Convener of AGU Fall Meeting 2013 session titled: “H13B. Global Precipitation Measurement, Validation, and Applications III Posters”, San Francisco, CA, U.S., Dec. 15-19, 2014.

- Outstanding Student Paper Awards liaison for the Global Precipitation Measurement sessions (H31K, H32B, H33E, H41M and H42A) at the AGU Fall meeting 2013, San Francisco, CA, U.S., Dec. 9-13, 2013.

- Outstanding Student Paper Awards judge for the Global Precipitation Measurement sessions (H31K, H32B, H33E, H41M and H42A) at the AGU Fall meeting 2013, San Francisco, CA, U.S., Dec. 9-13, 2013.

- Convener of AGU Fall Meeting 2013 session titled: “H33E. Global Precipitation Measurement, Validation, and Applications III Posters”, San Francisco, CA, U.S., Dec. 9-13, 2013.

- Co-convener of 1st International Megha-Tropiques Ground Validation Workshop session titled: “Hydrological applications – Rainfall error propagation” with Dr. M. Anagnostou, Toulouse, France, Sept. 25-27, 2013.

- Member of the International Precipitation Working Group (IPWG), 2013-present.

- Member of AGU’s Precipitation Technical Committee, 2013-present.

- Member of NASA Precipitation Measurement Mission (PMM) Science Team, 2013-present.

- Quantitative Precipitation Estimation Group leader, Hydros Laboratory (http://hydro.ou.edu/), Norman, OK, USA, 2011-2012.

- Several talks given to middle and high school classes in meteorology and hydrology at Forum de la Météorologie, Paris, France, 2010

- Organization member of the symposium Weather Radar and Hydrology 2008 at Grenoble (http://www.wrah-2008.com/), Grenoble, France, 2008

- Member of the committee of Laboratoire d’étude des Transferts en Hydrologie et Environnement (LTHE), Grenoble, France, 2007**.**

Teaching experience

- *Fall 2013*: Instructor at University of Oklahoma, CEES-5903-001: Remote Sensing Hydrology (undergraduate level).

- *Fall 2007*: lecturing for practical training « Flow measurement » at ENSHMG (undergraduate level).

Student Supervision

- Committee member of Ph.D. student, Manabrenda Saharia, enrolled in the Hydrometeorology and Remote Sensing (HyDROS) Laboratory, Oklahoma, U.S., 2013–present.

- Supervisor of graduate research assistant (M.S.), Nicholas Carr, enrolled in the School of Meteorology at the University of Oklahoma, U.S., 2013-present.

- Science Adviser of graduate research assistant (Ph.D.), Maruša Špitalar, enrolled in the Hydrometeorology and Remote Sensing (HyDROS) Laboratory, Oklahoma, U.S., 2013–present.

- Science Adviser of graduate research assistant, Xiaogang He, enrolled in the Hydrometeorology and Remote Sensing (HyDROS) Laboratory, Oklahoma, U.S., 2013–present.

- Science Adviser of graduate research assistant (Ph.D.), Yixin Wen, in the School of Meteorology at the University of Oklahoma, U.S., 2012–present.

- Science Adviser of graduate research assistant (Ph.D.), Humberto Vergara, enrolled in the School of Civil Engineering and Enviromental Science, University of Oklahoma, U.S., 2012–present.

- Science Adviser of Ph.D. student, Florian Delahaye, enrolled in Littoral, Environnement, Télédétection, Géomatique (LETG), France 2011–2013.

- Technical Adviser of Ph.D. student, Sahra Kacimi, enrolled in Laboratoire Atmospheres, Milieux, Observations Spatiales (LATMOS), France 2008–2011.

- Supervisor of 2 undergraduate interns, Ludivine Jegat and Jimmy Zwiebel in Laboratoire Atmospheres, Milieux, Observations Spatiales (LATMOS), 2009.

Field Experiments

- PX-1000 Solid State Radar Colorado Field Campaign, Colorado, U.S., September-October 2014; principal investigator; managed PX-1000 mobile radar deployment.

- iPHEX Campaign, North Carolina, U.S., May-June 2014; mission scientist in charge of NOXP X-band radar, logistics.
  http://pmm.nasa.gov/node/1085

- Hymex Campaign, Ales, France, September-October 2012; mission scientist in charge of NOXP X-band radar, logistics.
  http://www.hymex.org/

- Megha-Tropiques Aircraft/radar based Microphysics Validation Campaign, Niamey, Niger, August 2010 ; operated X-band radar, assisted in flights.
  http://meghatropiques.ipsl.polytechnique.fr/the-niamey-2010-campaign-in-niger.html

Seminars

- **Kirstetter, P.E.**, B.L. Cheong, T.Y. Yu, *RWEACT's Early Severe Weather Notification System development and deployment: contribution of the University of Oklahoma*.

Rio Grande Watershed Emergency Action Coordination Team and Colorado Water Conservation Board, Creede, CO, US, September 30, 2014.

- **Kirstetter, P.E.,** *Identification of Vertical Profile of Reflectivity from Volume Scan Radar Data: from statistically to physically based approaches*.
  Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, US, February 01, 2013.

- **Kirstetter, P.E.,** *Systematic evaluation of space borne precipitation radar estimates using NOAA/NSSL National Mosaic QPE products*
  University of Connecticut, CT, US, January 27, 2012.

- **Kirstetter, P.E.,** *Estimation des precipitations depuis l'espace: challenges causes par la variabilite et la microphysique de la pluie.*
  Laboratoire Atmospheres, Milieux, Observations Spatiales, Paris, France, January 09, 2012.

- **Kirstetter, P.E.,** *Systematic Evaluation of NASA Precipitation Radar Estimates Using NOAA/NSSL National Mosaic QPE Products.*
  Atmospheric Radar Research Center, Norman, OK, US, September 22, 2011.

- **Kirstetter, P.E.,** *Uncertainty models for radar and satellite quantitative precipitation estimation.*
  Instituto Nacional de Pesquisas Espaciais / Centro de Previsão de Tempo e Estudos Climáticos, Cachoeira Paulista, SP, Brazil, February 24, 2011.

- **Kirstetter, P.E.,** *Physically-based identification of the vertical structure of radar reflectivity.*
  Instituto Nacional de Pesquisas Espaciais / Centro de Previsão de Tempo e Estudos Climáticos, Cachoeira Paulista, SP, Brazil, January 12, 2011.

Languages

- French (native)

- English (good skills, both written and oral)

Publications in preparation or submitted

Kirstetter, P.E., et al.: Validation of precipitation estimates from the Global Precipitation Measurement (GPM) mission. *Bulletin of the American Meteorological Society, in preparation*

Golian, S., S. Moazami, Y. Hong, **P.E. Kirstetter**: Merging Multiple Satellite Rainfall Estimate Algorithms over a Complex Terrain. *Water Resources Management, submitted*

Peer-reviewed Publications

Carr, N., **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, M. Schwaller, W. Petersen, N.Y. Wang, R. Ferraro, X. Xue: The influence of surface and precipitation characteristics on TRMM TMI rainfall retrieval uncertainty. *Journal of Hydrometeorology, accepted.*

Delahaye, F.,**P.E. Kirstetter**, V. Dubreuil, L.A.T. Machado and D.A. Vila: Daily rainfall analysis over Brazilian Amazonia: Variographic approach and variability index. *Journal of Hydrology, accepted.*

W.A. Gonçalves, L.A.T. Machado and **P.E. Kirstetter**: The biomass burning aerosol influence on precipitation over the Central Amazon: An observational study. *Atmospheric Chemistry and Physics, 14, 18879-18904. doi:10.5194/acpd-14-18879-2014*

37. **Kirstetter, P.E.**, J.J. Gourley, Y. Hong,J. Zhang, S. Moazamigoodarzi, C. Langston, A. Arthur : A Paradigm for Probabilistic Precipitation Rate Estimates with Ground-based Radar Networks. *Water Resources Research, in press.*

36. He, X., K. Hyungjun, **P.E. Kirstetter**, K. Yoshimura, E.C. Chang, C.R. Ferguson, J.M. Erlingis, Y. Hong, T. Oki: Evaluating the Diurnal Cycle of Precipitation Representation in West African Monsoon Region with Different Convection Schemes and Model Resolutions. *Weather and Forecasting, in press. doi: 10.1175/WAF-D-14-00013.1*

35. Bousquet, O., A. Berne, J. Delanoe, Y. Dufournet, J.J. Gourley, J. Van Baelen, C. Augros, L. Besson, B. Boudevillain, O. Caumont, E. Defer, J. Grazioli, D.J. Jorgensen, **P.E. Kirstetter**, J.F. Ribaud, J. Beck, G. Delrieu, V. Ducrocq, D. Scipion, A. Schwarzenboeck, J. Zwiebel: Multiple-frequency radar observations collected in southern France during the field phase of the Hydrometeorological Cycle in the Mediterranean Experiment (HyMeX). *Bulletin of the American Meteorological Society, in press. doi: 10.1175/BAMS-D-13-00076.1*

34. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, M. Schwaller, W. Petersen and Q. Cao: Impact of sub-pixel rainfall variability on spaceborne precipitation estimation: evaluating the TRMM 2A25 product. *Quarterly Journal of the Royal Meteorological Society, in press. doi: 10.1002/qj.2416.*

33. Špitalar, M., C. Lutoff, J.J. Gourley, **P.E. Kirstetter**, M. Brilly, N. Carr: Analysis of flash flood parameters and human impacts in the US. *Journal of Hydrology, **519**(A), 863–870. doi: 10.1016/j.jhydrol.2014.07.004*

32. Delrieu, G., A. Wijbrans, B. Boudevillain, D. Faure, L. Bonnifait, **P.E. Kirstetter**: Geostatistical radar-raingauge merging: a novel method for the quantification of the rain estimation accuracy. *Advances in Water Resources, **71(2014)**, 110-124. doi:10.1016/j.advwatres.2014.06.005*

31. Cao, C., Y. Hong, Y. Wen, J.J. Gourley, and **P.E. Kirstetter**, 2014: Enhancing Quantitative Precipitation Estimation (QPE) over Continental United States (CONUS) using a Multi-sensor Integration Approach. *IEEE Geoscience and Remote Sensing Letters, **11**(7), 2014.*doi:10.1109/LGRS.2013.2295768

30. Seyyedi, H., E.N. Anagnostou, **P.E. Kirstetter**, V. Maggioni, Y. Hong, J.J. Gourley, 2014: Incorporating Surface Soil Moisture Information in Error Modeling of TRMM Passive Microwave Rainfall. *IEEE Transactions on Geoscience and Remote Sensing, **52(10)**, 6226-6240. doi:10.1109/TGRS.2013.2295795*

29. Vergara, H., Y. Hong, J.J. Gourley, E. Anagnostou, V. Maggioni, D. Stampoulis and **P.E. Kirstetter**, 2014: Effects of Resolution of Satellite-based Rainfall Estimates on Hydrologic Modeling Skill at Different Scales. *Journal of Hydrometeorology*, **15**, 593–613. doi:10.1175/JHM-D-12-0113.1

28. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, Q. Cao, M. Schwaller, and W. Petersen, 2014: A research framework to bridge from the Global Precipitation Measurement mission core satellite to the constellation sensors using ground radar-based National Mosaic QPE. In L. Venkataraman, Remote Sensing of the Terrestrial Water Cycle. *AGU books Geophysical Monograph Series, Chapman monograph on remote sensing*. John Wiley & Sons Inc. ISBN: 1118872037.

27. Delrieu, G., L. Bonnifait, **P.E. Kirstetter** and B. Boudevillain, 2014: Dependance of radar quantitative precipitation estimation error on the rain intensity in the Cévennes-Vivarais region, France. *Hydrological Sciences Journal, **59**(7), 1–12. doi:10.1080/02626667.2013.827337*

26. Chen, C., Y. Hong, Q. Cao, J. J. Gourley, Y. Tian, J. Hardy, **P.E. Kirstetter**, B. Yong, and Y. Shen, 2013: Similarity and Difference of the two Successive V6 and V7 TRMM Multi-satellite Precipitation Analysis Performance over China. *Journal of Geophysical Research*, **118**, 13060–13074. doi:10.1002/2013JD019964

25. Chen, S., Y. Hong, Q. Cao, **P.E. Kirstetter**, J.J. Gourley, Y. Qi, J. Zhang, K. Howard, J. Hu and J. Wang, 2013: Performance Evaluation of Radar and Satellite Rainfall Products for Typhoon Morakot Over Taiwan: Are Remote-sensing Products Ready for Gauge Denial Scenario of Extreme Events? *Journal of Hydrology, **506**,* 4-13. doi:10.1016/j.jhydrol.2012.12.026

24. Delrieu, G., B. Boudevillain, A. Wijbrans, D. Faure, L. Bonnifait, **P.E. Kirstetter**, A. Confoland, 2013: Prototype de ré-analyses pluviométriques pour la région Cévennes-Vivarais en 2008. *La Météorologie*, **83**. doi:10.4267/2042/52052

23. Chen, S., Y. Hong, J.J. Gourley, G.J. Huffman, Y.D. Tian, Q. Cao, **P.E. Kirstetter**, J.J. Hu, J. Hardy, X.W. Xue, B. Yong, 2013: Evaluation of the Latest TMPA Precipitation Estimates (Successive 3B42 V6 and V7) over the Continental United States. *Water Resources Research,* **49**, 1-13. doi:10.1002/2012WR012795

22. Chen, S., **P.E. Kirstetter**, Y. Hong, J.J. Gourley, Y. Tian, Y. Qi, Q. Cao, J. Zhang, K. Howard, J. Hu and X. Xue, 2013: Evaluation of Spatial Errors of Precipitation Rates and Types from TRMM Space-borne Radar over the southern CONUS. *Journal of Hydrometeorology,* **14**, 1884–1896*.* doi:10.1175/JHM-D-13-027.1

21. Chen, S., J.J. Gourley, Y. Hong, **P.E. Kirstetter**, J. Zhang, K. Howard, Z. Flamig, J. Hu, Y. Qi, 2013: Evaluation and Uncertainty Estimation of NOAA/NSSL Next Generation National Mosaic QPE (Q2) over the Continental United States. *Journal of Hydrometeorology*, **14**, 1308-1322. doi:10.1175/JHM-D-12-0150.1

20. Wen, Y., Q. Cao, **P.E. Kirstetter**, Y. Hong, J.J. Gourley, J. Zhang, G. Zhang and B. Yong, 2013: Incorporating NASA space-borne radar data into NOAA National Mosaic QPE system for improved precipitation measurement: a physically based VPR identification and enhancement method. *Journal of Hydrometeorology*, **14**, 1293-1307. doi:10.1175/JHM-D-12-0106.1

19. Gourley, J., Y. Hong Z. Flamig, A. Arthur, R. Clark, M. Calianno, I. Ruin, T. Ortel, M. Wieczorek, **P.E. Kirstetter**, E. Clark, W. Krajewski, 2013: A Unified Flash Flood Database over the US. *Bulletin of the American Meteorological Society*, **94**(6), 799-805. doi: 10.1175/BAMS-D-12-00198

18. **Kirstetter, P.E.**, H. Andrieu, B. Boudevillain and G. Delrieu, 2013: A physically-based identification of vertical profiles of reflectivity from volume scan radar data. *Journal of Applied Meteorology and Climatology*, **52**(7), 1645-1663. doi: 10.1175/JAMC-D-12-0228.1

17. Kacimi S., N. Viltard and **P.E. Kirstetter**, 2013: A new methodology for rain identification from passive microwave data in Tropics using neural networks. *Quarterly Journal of the Royal Meteorological Society: Special Issue on the Megha-Tropiques mission*, **139**, 912-922. doi:10.1002/qj.2114

16. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, M. Schwaller, W. Petersen and J. Zhang, 2013: Comparison of TRMM 2A25 Products Version 6 and Version 7 with NOAA/NSSL Ground Radar-based National Mosaic QPE. *Journal of Hydrometeorology*, **14**(2), 661-669. doi:10.1175/JHM-D-12-030.1

15. Cao, Q., Y. Hong, J.J. Gourley, Y. Qi, J. Zhang, Y. Wen, and **P.E. Kirstetter**, 2013: Statistical and Physical Analysis of Vertical Structure of Precipitation in Mountainous West Region of US using 11+ Year Spaceborne TRMM PR Observations. *Journal of Applied Meteorology and Climatology*, **52**, 408-424. doi:10.1175/JAMC-D-12-095.1

14. **Kirstetter, P.E.**, N. Viltard and M. Gosset, 2013: An error model for instantaneous satellite rainfall estimates: evaluation of BRAIN-TMI over West Africa. *Quarterly Journal of the Royal Meteorological Society: Special Issue on the Megha-Tropiques mission*, **139**, 894-911. doi:10.1002/qj.1964

13. Brogniez H., **P.E. Kirstetter** and L. Eymard, 2013: Expected improvements in the atmospheric humidity profile retrieval using the Megha-Tropiques microwave payload. *Quarterly Journal of the Royal Meteorological Society: Special Issue on the Megha-Tropiques mission*, **139**, 842-851. doi:10.1002/qj.1869

12. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, S. Chen, Z. Flamig, J. Zhang, M. Schwaller, W. Petersen and E. Amitai, 2012: Toward a Framework for Systematic Error Modeling of Spaceborne Precipitation Radar with NOAA/NSSL Ground Radar-based National Mosaic QPE. *Journal of Hydrometeorology*, **13**(4), 1285-1300. doi:10.1175/JHM-D-11-0139.1

11. Boudevillain, B., G. Delrieu, B. Galabertier, L. Bonnifait, L. Bouilloud, **P.E. Kirstetter** and M.L. Mosini, 2011: The Cevennes-Vivarais Mediterranean Hydrometeorological Observatory database. *Water Resources Research*, **47**, W07701. doi:10.1029/2010WR010353

10. Bouilloud, L., G. Delrieu, B. Boudevillain and **P.E. Kirstetter**, 2010: Radar rainfall estimation in the context of post-event analysis of flash-flood events. *Journal of Hydrology*, **394**(1-2), 17-27. doi:10.1016/j.jhydrol.2010.02.035

9. **Kirstetter, P.E.**, G. Delrieu, B. Boudevillain and C. Obled, 2010: Toward an error model for radar quantitative precipitation estimation in the Cévennes-Vivarais region, France. *Journal of Hydrology*, 394(1-2), 28-41. doi:10.1016/j.jhydrol.2010.01.009

8. **Kirstetter, P.E.**, H. Andrieu, G. Delrieu and B. Boudevillain, 2010: Identification of vertical profiles of reflectivity for correction of volumetric radar data using rainfall classification. *Journal of Applied Meteorology and Climatology*, **49**(10), 2167–2180. doi: 10.1175/2010JAMC2369.1

7. Roca, R., P. Chambon, I. Jobard, **P.E. Kirstetter**, M. Gosset and J.C. Bergès, 2009: Comparing satellite and surface rainfall products over West Africa at meteorologically relevant scales during the AMMA campaign using error estimates. *Journal of Applied Meteorology and Climatology*, **49**, 715–731. doi:10.1175/2009JAMC2318.1

6. Delrieu, G., B. Boudevillain, J. Nicol, B. Chapon, **P.E. Kirstetter**, H. Andrieu and D. Faure, 2009: Bollène 2002 experiment: radar quantitative precipitation estimation in the Cévennes-Vivarais region, France. *Journal of Applied Meteorology and Climatology*, **48**, 1422-1447. doi:10.1175/2008JAMC1987.1

5. **Kirstetter, P.E.**, G. Delrieu and H. Andrieu, 2009: Radar quantitative precipitation estimation: inference of the vertical profile of reflectivity, radar-raingauge error model. *La Houille Blanche – Revue Internationale de l'Eau*, **6**, 150-156, 2009. doi:10.1051/lhb/2009093

4. Boudevillain, B., S. Argence, C. Claud, V. Ducrocq, B. Joly, A. Joly, D. Lambert, O. Nuissier, M. Plu, D. Ricard, P. Arbogast, A. Berne,J.P. Chaboureau, B. Chapon, F. Crépin, G. Delrieu, E. Doerflinger, B. Funatsu, **P.E. Kirstetter**, F. Masson, K. Maynard, E. Richard,E. Sanchez, L. Terray, A. Walpersdorf, 2009: Cyclogénèse et précipitations intenses en région méditerranéenne: origines et caractéristiques. *La Météorologie*, **66**, 18-28.

3. Delrieu, G., **P.E. Kirstetter**, B. Boudevillain, 2006:Toward an error model for radar quantitative precipitation estimation. *La Houille Blanche – Revue Internationale de l'Eau*, **6**, 27-32, 2006. doi :10.1051/lhb:2006097

2. Delrieu, G., V. Ducrocq, E. Gaume, J. Nicol, O. Payrastre, E. Yates, **P.E. Kirstetter**, H. Andrieu, P.A. Ayral, C. Bouvier, J.D. Creutin,M. Livet, S. Anquetin, M. Lang, L. Neppel, C. Obled, J.P. du-Chatelet, G.M. Saulnier, A. Walpersdorf and W. Wobrock, 2005: The Catastrophic Flash-Flood Event of 8–9 September 2002 in the Gard Region, France: A First Case Study for the Cévennes–Vivarais Mediterranean Hydrometeorological Observatory. *Journal of Hydrometeorology*, **6**(1), pp. 34-52. doi:10.1175/JHM-400.1

1. Delrieu, G., **P.E. Kirstetter**, J. Nicol and L. Neppel, 2004: The 8-9 September 2002 rain event in the Gard region, France: Rainfall estimation using radar and rain gauge observations. *La Houille Blanche – Revue Internationale de l'Eau*, **6**, 93-98, 2004. doi:10.1051/lhb:200406013

Conference proceedings, orals and posters

74. Gourley, J., Z. Flamig, H. Vergara, R. Clark, **P.E. Kirstetter**, G. Terti, Y. Hong, K. Howard: Evaluation of flash flood products from the Flooded Locations And Simulated Hydrographs (FLASH) project. *Oral presentation at the 95th American Meteorological Society Annual Meeting*, Phoenix, AZ, U.S., Jan. 4-8, 2015.

73. **Kirstetter, P.E.**, Y. Hong, J. Gourley, N. Carr, W. Petersen, M. Schwaller, E. Anagnostou, C. Kummerwow, R. Ferraro, N.Y. Wang: : Evaluating the Global Precipitation Measurement Mission with NOAA/NSSL Multi-Radar Multisensor: Past, Current Status and Future Directions. *Oral presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

72. Kummerow, C., S. Ringerud, D. Randel, **P.E. Kirstetter**: Initial Gprof Results Using a GPM Derived Database. *Oral presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

71. Saharia, M., **P.E. Kirstetter**, J. Gourley, Y. Hong, H. Vergara: Characterization of Floods in the United States. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

70. Carr, N., **P.E. Kirstetter**, Y. Hong, J. Gourley, R. Ferraro, C, Kummerwow, W. Petersen, M. Schwaller, N.Y. Wang: Evaluating the Influence of Surface and Precipitation Characteristics on TMI and GMI Precipitation Retrievals. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

69. Grams, H., J. Gourley, R. Rabin, **P.E. Kirstetter**: Merging GOES-R ABI and TRMM/GPM Observations with MRMS Ground-Based Radar for Real-Time QPE in Complex Terrain. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

68. Wen, Y., Y. Hong, **P.E. Kirstetter**, J. Gourley, J. Zhang: The Latest Progress in the VPR-Identification and Enhancement (VPR-IE) Approach: Incorporate Climatological

and Real-time VPR Information from Spaceborne Precipitation Radar to the NOAA MRMS system. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 15-19, 2014.

67. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, N. Carr, J. Turk, Q. Cao, J. Zhang, W. Petersen, M. Schwaller, M. Anagnostou, R. Ferraro, N.Y. Wang, C. Kummerow: Evaluating GPM Level II Precipitation Products at fine scale over the Conterminous United States: preliminary results. *Poster presentation at the 7th IPWG Workshop*, Tsukuba, Japan, Nov. 17-21, 2014.

66. Wen, Y., Y. Hong, **P.E. Kirstetter**, J.J. Gourley, J. Zhang: Systematical evaluation of VPR- Identification and Enhancement (VPR-IE) approach for different precipitation types. *Oral presentation at the SPIE Remote Sensing of the Atmosphere, Clouds, and Precipitation V*, Beijing, China, Oct. 13-16, 2014.
65. Delrieu, G., B. Boudevillain, A. Wijbrans, A. Confoland, L. Bonnifait, D. Faure, **P.E. Kirstetter**: A 6-year high-resolution rainfall reanalysis based on radar-raingauge merging in the Cévennes-Vivarais region, France. *Oral presentation at the 8th HyMeX Workshop*, Valletta, Malta, September 15-18, 2014.

64. **Kirstetter, P.E.**, Jonathan Gourley, Y. Hong, J. Zhang, S. Moazamigoodarzi, C. Langston, A. Arthur: A probabilistic Quantitative Precipitation Estimation for ground-based radar networks at high space and time scale. *Poster presentation at the Height European Conference on Radar in Meteorology and Hydrology (ERAD2014)*, Garmisch-Partenkirchen, Germany, September 1-5, 2014.

63. Wang, J., W. Petersen, D. Wolff, G. Huffman, D. Bolvin, **P.E. Kirstetter**: Validation of satellite precipitation products using NMQ over the CONUS. *Poster presentation at the Height European Conference on Radar in Meteorology and Hydrology (ERAD2014)*, Garmisch-Partenkirchen, Germany, September 1-5, 2014.

62. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, J. Zhang, N. Carr, Q. Cao, W.A. Petersen, M. Schwaller, EN. Anagnostou, R. Ferraro, N.Y. Wang, C. Kummerow: Use of NEXRAD to support NASA precipitation missions: past, current status and future directions. *Oral presentation at the 2014 PMM Science team meeting*, Baltimore, MD, U.S., August 4-8, 2014.

61. Gourley, J., **P.E. Kirstetter**, et al.: Use of NSSL ground radar datasets to support IPHEx and GPM. *Oral presentation at the 2014 PMM Science team meeting*, Baltimore, MD, U.S., August 4-8, 2014.

60. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, J. Zhang, N. Carr, Q. Cao, W.A. Petersen, M. Schwaller, EN. Anagnostou, R. Ferraro, N.Y. Wang, C. Kummerow: A Research Framework to Bridge GPM Core and Constellation Sensors using Polarimetric National Mosaic QPE (NMQ). *Poster presentation at the 2014 PMM Science team meeting*, Baltimore, MD, U.S., August 4-8, 2014.

59. **Kirstetter, P.E.**, E. Anagnostou, T. Pellarin, T. Vischel, Y. Hong, J.J. Gourley: Influence of land surface moisture on instantaneous TRMM passive microwave rainfall retrieval uncertainty over West Africa. *Poster presentation at the 7th International Conference on the Global Water and Energy Cycle*, The Hague, The Netherlands, July 14-18, 2014.

58. Kummerow, C., D. Randel, **P.E. Kirstetter**, M. Kulie, N.Y. Wang: Precipitation from the GPM Microwave Imager and Constellation Radiometers. *Oral presentation at European Geosciences Union General Assembly 2014*, Vienna, Austria, Apr. 27- May 2, 2014.

57. Delrieu, G., B. Boudevillain, **P.E. Kirstetter**: In search for the location of the future Météo-France X-band polarimetric radar in the Grenoble region, France. *Proceedings and oral presentation at the 2014 International Weather Radar and Hydrology Symposium*,Washington, U.S., Apr. 7-10, 2014.

56. Gourley, J.J., B. Cosgrove, H. Vergara, B. Smith, Z. Flamig, **P.E. Kirstetter**: Exploring Methods to Derive Flooding Thresholds in Ungauged Basins using a Distributed Hydrologic Model. *Proceedings and oral presentation at the 2014 International Weather Radar and Hydrology Symposium*,Washington, U.S., Apr. 7-10, 2014.

55. Moser Grams, H., J.J. Gourley, **P.E. Kirstetter**: Development of a probability-matched database relating ground-based radar to GOES-R measurements for QPE applications. *Proceedings and poster presentation at the 2014 International Weather Radar and Hydrology Symposium*,Washington, U.S., Apr. 7-10, 2014.

54. Moser Grams, H., J.J. Gourley, **P.E. Kirstetter**: Development of a high-resolution multisensor rainfall product for flash flood detection in radar sparse regions of the U.S. *Oral presentation at the NOAA Satellite Science Week 2014*, U.S., Mar. 10-14, 2014.

53. Belew, J.D., A. Tokay, D.B. Wolff, W.A. Petersen, **Kirstetter, P.E.**, Y. Hong, J.J. Gourley: Towards Evaluation of the National Mosaic and Quantitative Precipitation Estimate (NMQ) Product by an Experimental Rain Gauge Network. *Poster presentation at 94th AMS Annual Meeting*, Atlanta, GA, U.S., Feb. 2-6, 2014.

52. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, Q. Cao, J. Zhang, S. Chen, W.A. Petersen, M. Schwaller, EN. Anagnostou: Evaluating GPM Precipitation Products in Real-Time. *Oral presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 9-13, 2013.

51. Gourley, J.J., **P.E. Kirstetter**, Y. Hong, J. Hardy, Z. Flamig: Uncertainty in Quantitative Precipitation Estimates and Forecasts in a Hydrologic Modeling Context. *Oral presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 9-13, 2013.

50. Vergara, H., **P.E. Kirstetter**, Y. Hong, J.J. Gourley, X. Wang: Impact of Uncertainty Characterization of Satellite Rainfall Inputs and Model Parameters on Hydrological Data Assimilation with the Ensemble Kalman Filter for Flood Prediction. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 9-13, 2013.

49. Wen, Y., Y. Hong, Q. Cao, **P.E. Kirstetter**, J.J. Gourley, J. Zhang: Cross Validation of Spaceborne and Ground Polarimetric Radar Snowfall Retrievals. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 9-13, 2013.

48. Sims, E., Y. You, **P.E. Kirstetter**, Y. Hong, J.J. Gourley, Q. Cao, S. Chen: Validation of the Snowfall Estimations from Microwave Satellite observations by ground Radar observations. *Poster presentation at AGU Fall Meeting*, San Francisco, CA, U.S., Dec. 9-13, 2013.

47. **P.E. Kirstetter**, Y. Hong, J.J. Gourley, M. Anagnostou, Q. Cao, V. Maggioni, H. Seyyedi, W. Petersen, M. Schwaller, J. Zhang: : Use of the National Mosaic QPE Products for U.S. GPM Ground Validation Applications. *Oral presentation at 6th International Workshop for GPM Ground Validation*, Rome, Italy, November 5-7, 2013.

46. G. Delrieu, A. Wijbrans, B. Boudevillain, D. Faure, A. Confoland, L. Bonnifait, **P.E. Kirstetter**: Radar-raingauge rainfall re-analyses in the Cevennes region, France: methodology and error model. *Poster presentation at the 6th International Workshop for GPM Ground Validation*, Rome, Italy, November 5-7, 2013.

45. **Kirstetter, P.E.**, J.J. Gourley, M. Anagnostou, Y. Hong, O. Bousquet, Q. Cao: Microphysical characteristics of heavy, Mediterranean rainfall retrieved from polarimetric radar measurements during the Hymex field campaign.
Oral presentation at the 7th HyMeX Workshop, Cassis, France, October 7-10, 2013.

44. G. Delrieu, B. Boudevillain, A. Wijbrans, A. Confoland, D. Faure, L. Bonnifait, **P.E. Kirstetter**: Radar-raingauge rainfall re-analyses in the Cevennes region, France: methodology and error characteristics.
Poster presentation at the 7th HyMeX Workshop, Cassis, France, October 7-10, 2013.

43. O. Bousquet, A. Berne, J. Delanoë, Y. Dufournet, J.J. Gourley, J. Van Baelen, C. Augros, L. Besson, B. Boudevillain, O. Caumont, S. Coquillat, E. Defer, V. Ducrocq, J. Grazioli, D.J. Jorgensen, **P.E. Kirstetter**, J.F. Ribaud, D. Scipion, H. Al-Sakka, A.A. Boumahmoud, J. Beck, B. Fradon, A.Schwarzenboeck, P. Tabary: Multiple-frequency radar observations collected in Southern France during HyMeX SOP1.
Poster presentation at the 7th HyMeX Workshop, Cassis, France, October 7-10, 2013.

41. **Kirstetter, P.E.**, Y. Hong,J.J. Gourley, M. Anagnostou, Q. Cao, V. Maggioni, H. Seyyedi, W. Petersen, M. Schwaller, J. Zhang: A research framework to evaluate Level 2 active and passive rainfall products using ground radar-based National Mosaic QPE.
Oral presentation at the 1st International Megha-Tropiques Ground Validation Workshop, Toulouse, France, September 25-27, 2013.

41. Anagnostou, M., E. Nikolopoulos, V. Maggioni, **P.E. Kirstetter**, N. Bartsotas, H. Vergara Arrieta, J.J. Gourley, Y. Hong: Using Satellite Rainfall for Flood Modeling in Mountainous Basins.
Oral presentation at the 1st International Megha-Tropiques Ground Validation Workshop, Toulouse, France, September 25-27, 2013.

40. **Kirstetter, P.E.**, J.J. Gourley, Y. Hong, Q. Cao, O. Bousquet, A. Ryzkhov: Microphysical characteristics of heavy, Mediterranean rainfall retrieved from polarimetric radar measurements during the Hymex field campaign.
Oral presentation at the 36th Conference on Radar Meteorology, Breckenridge, CO, U.S., September 16-20, 2013.

39. **Kirstetter, P.E.**, J.J. Gourley, Y. Hong, S. Moazamigoodarzi, E. Mintmire: Probabilistic Quantitative Precipitation Estimates with NOAA/NSSL Ground Radar-Based National Mosaic and QPE System.
Poster presentation at the 36th Conference on Radar Meteorology, Breckenridge, CO, U.S., September 16-20, 2013.

38. Cao, Q., Y. Hong, S. Chen, J.J. Gourley, J. Zhang, **P.E. Kirstetter**: Detectability of Falling Snow with NASA CloudSat Satellite: Evaluation from NOAA/NSSL Ground-Radar-Based National Multi-sensor Mosaic QPE (NMQ) System.
Poster presentation at the 36th Conference on Radar Meteorology, Breckenridge, CO, U.S., September 16-20, 2013.

37. Wen, Y., Y. Hong, Q. Cao, G. Zhang, J.J. Gourley, J. Zhang, Z. Flamig, **P.E. Kirstetter**: Systematical Evaluation of VPR-Identification and Enhancement (VPR-IE) Approach: Incorporate Space-borne Radar into Ground Radar Network.
Poster presentation at the 36th Conference on Radar Meteorology, Breckenridge, CO, U.S., September 16-20, 2013.

36. Wen, Y., Y. Hong, Q. Cao, G. Zhang, J.J. Gourley, J. Zhang, **P.E. Kirstetter**, Z. Flamig, and X. Xue, 2013: Capture extreme precipitation events in Mountainous Region: incorporate space-borne radar into ground radar network using VPR-IE method.
Oral presentation at the 2nd China-U.S. Symposium on Meteorology, Qingdao, China, June 25-27, 2013.

34. G. Delrieu, A. Wijbrans, B. Boudevillain, A. Confauland, L. Bonnifait, D. Faure, **P.E. Kirstetter**: Rainfall estimation in the Cevennes region, France: radar-raingauge reanalyses and error models. *Oral presentation at the 11th International Precipitation Conference*, Ede-Wageningen, The Netherlands, June 30 – July 3, 2013.

33. J.J. Gourley, B. Rabin, **P.E. Kirstetter**: WiMerge: Mosaicking NEXRAD Dual-Pol and GPM DPR Products for Hydrometeor Retrievals and QPE over the CONUS.
Oral presentation at the 3rd NOAA User Workshop on the Global Precipitation Measurement (GPM) Mission, College Park, MD, U.S., April 2-4, 2013.

32. **P.E. Kirstetter**, Y. Hong, Q. Cao, J.J. Gourley, W. Petersen, C. Kummerow, R. Ferraro, N.Y. Wang, J. Zhang: A Research Framework to Bridge GPM Core and Constellation Sensors using Polarimetric National Mosaic QPE (NMQ).
Poster presentation at the 2013 NASA Precipitation Measurement Missions (PMM) Science Team, Annapolis, MD, U.S., March 18-21, 2013.

31. E.N. Anagnostou, **P.E. Kirstetter**, H. Seyeddi, Y. Hong, JJ. Gourley, V. Maggioni, N. Viltard, R. Ferraro, N.Y. Wang, W. Petersen, M. Schwaller: A framework for end-to-end verification of the passive microwave satellite precipitation retrievals.
Poster presentation at the 2013 NASA Precipitation Measurement Missions (PMM) Science Team, Annapolis, MD, U.S., March 18-21, 2013.

30. E.N. Anagnostou, Y. Hong, JJ. Gourley, H. Seyeddi, Y. Mei, Z. Flamig , **P.E. Kirstetter**, V. Maggioni: Investigating Improvements on Satellite Rainfall Uses for Complex Terrain Flood Modeling.
Poster presentation at the 2013 NASA Precipitation Measurement Missions (PMM) Science Team, Annapolis, MD, U.S., March 18-21, 2013.

29. G. Delrieu, L. Baldini, E. Adirosi, E. Anagnostou, M.N. Anagnostou, S. Anquetin, S. Barbieri, A. Berne, M. Borga, B. Boudevillain, M. Calianno, M. Colantonio, S. Di Fabio, P. Domaszczynski, V. Ducrocq, R. Ferretti, P. Gatlin, E. Gorgucci, J.J. Gourley, D. Jorgensen, J. Kalogiros, **P.E. Kirstetter**, F. S. Marzano, M. Montopoli, G. Molinie, G. Panegrossi, E. Picciotti, N. Roberto, S. Sebastianelli, G. Simon, G. Vulpiani, M. Wingo: Debriefing of the HyMeX special observation period of the autumn 2012.
Oral presentation at the 2013 NASA Precipitation Measurement Missions (PMM) Science Team Meeting, Annapolis, MD, U.S., March 18-21, 2013.

28. Cao, Q., Y. Hong, G. Zhang, J.J. Gourley, **P.E. Kirstetter**, J. Zhang, A. Ryzhkov, T.S. L'Ecuyer: Icing-related hazardous weather revealed by CloudSat and NMQ system: Potential for enhancing the hydrometeor classification in sub-freezing region
Poster presentation at AMS Annual Meeting, Austin, TX, U.S., Jan. 5-10, 2013.

27. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, Q. Cao, M. Schwaller, W. Petersen, J. Zhang, E. Anagnostou, V. Maggioni, H. Seyyedi, S. Chen: Toward A Research Framework to Bridge Cross-platform Error Characterization of Spaceborne Passive/Active Sensors using NOAA/NSSL Ground Radar-based National Mosaic QPE Products over CONUS.
Oral presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

26. Cao, C., Y. Hong, Y. Wen, J.J. Gourley, Y. Qi, J. Zhang, **P.E. Kirstetter**: How Spaceborne Radar Helps Ground Radar in Precipitation Estimation: Real-time Incorporation of TRMM PR into NOAA NMQ System.
Oral presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

25. Seyyedi, H, E.N. Anagnostou, **P.E. Kirstetter**, V. Maggioni, J.J. Gourley, Y. Hong: Using Surface Soil Moisture Data in Overland Passive Microwave Rainfall Error Modeling.
Poster presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

24. Wen, Y., Y. Hong, Q. Cao, J.J. Gourley, J. Zhang, **P.E. Kirstetter**: VPR-IE: Combining climatological VPR information from TRMM Precipitation Radar with NEXRAD-based rainfall estimates.
Poster presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

23. Chen, S., **P.E. Kirstetter**, Y. Hong, J.J. Gourley, J. Zhang, K. Howard, J. Hu: Quantification of Spatial Errors of Precipitation Rates and Types from the TRMM Precipitation Radar (the latest successive V6 and V7) over the United States.
Poster presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

22. Hong, Y., Y. Zhang, X. Xue, X. Wang, J.J. Gourley, **P.E. Kirstetter**: A Global Hydrological Ensemble Forecasting System: Uncertainty Quantification and Data Assimilation.
Oral presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 3-7, 2012.

21. Delahaye, F., V. Dubreuil, L.A.T. Machado, **P.E. Kirstetter**, R.A.J. Oliveira: Influence des surfaces terrestres sur l'erreur d'estimation des precipitations quotidiennes par satellite en Amazonie Bresilienne.

XXVème Colloque de l'Association Internationale de Climatologie, Grenoble, France, Sep 5-8, 2012.

20. J.J. Gourley / **P.E. Kirstetter**:Systematic Cross-Evaluation of NASA Spaceborne Radar and NOAA/NSSL Ground Radar-based National Mosaic QPE Products Over Lower CONUS.
Oral presentation at 5th International Workshop for GPM Ground Validation, Toronto, Canada, July 10-12, 2012.

19. Gosset, M., R. Roca, P. Chambon, M. Alcoba, P. Caroline, A. Abdou, **P.E. Kirstetter**, I. Jobard, G. Quentin, T. Vischel: Satellite based Rainfall Estimation : review of recent evaluation work in West-Africa and perspective in the Megha-Tropiques/GPM framework.
Oral presentation at The Fourth African Monsoon Multidisciplinary Analyses International Conference, Toulouse, July 2012.

18. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, S. Chen, Z. Flamig, J. Zhang, M. Schwaller, W. Petersen and E. Amitai: Error analysis of spaceborne precipitation radar estimates using NOAA/NSSL National Mosaic QPE products.
Proceedings and oral presentation at the Seventh European Conference on Radar in Meteorology and Hydrology (ERAD2012), Toulouse, June 2012.

17. **Kirstetter, P.E.**, H. Andrieu, B. Boudevillain and G. Delrieu: Toward a physically-based identification of vertical profiles of reflectivity from volume scan radar data.
Proceedings and poster presentation at the Seventh European Conference on Radar in Meteorology and Hydrology (ERAD2012), Toulouse, June 2012.

16. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, S. Chen, Z. Flamig, J. Zhang, K. Howard, W.A. Petersen: Systematic evaluation of NASA precipitation radar estimates using NOAA/NSSL National Mosaic QPE products.
Oral presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 5-9, 2011.

15. Wen, Y., **P.E. Kirstetter**, Y. Hong, J. Zhang, J. J. Gourley, G. Zhang: Incorporating NASA space-borne precipitation products into National Mosaic QPE operational system for improved precipitation estimates.
Poster presentation at AGU Fall Meeting, San Francisco, CA, U.S., Dec. 5-9, 2011.

14. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, S. Chen, Z. Flamig, J. Zhang, K. Howard, M. Schwaller, W. Petersen and E. Amitai: Systematic evaluation of NASA precipitation radar estimates using NOAA/NSSL National Mosaic QPE products.
Poster presentation at the NASA Precipitation Measurement Missions (PMM) Science Team Meeting, Denver, CO, US, Nov 7-11, 2011.

13. Wen, Y., **P.E. Kirstetter**, Y. Hong, J. Zhang, J. J. Gourley, G. Zhang: Incorporating NASA space-borne precipitation products into National Mosaic QPE operational system for improved precipitation measurements.
Poster presentation at the 35th Conference on Radar Meteorology, Pittsburgh, PA, U.S., Sep 26-30, 2011.

12. **Kirstetter, P.E.**, Y. Hong, J.J. Gourley, S. Chen: Systematic Cross-Evaluation of NASA Spaceborne Radar and NOAA/NSSL Ground Radar-based National Mosaic QPE Products over Lower CONUS.
Oral presentation at the International Symposium on Earth-Science Challenges (ISEC), Norman, OK, US, Sep 14-16, 2011.

11. **Kirstetter, P.E.**, H. Andrieu, B. Boudevillain and G. Delrieu: Toward a physically-based identification of vertical profiles of reflectivity from volume scan radar data.
IAHS Publ. 351-16 at the Weather Radar and Hydrology symposium (WRaH2011), Exeter, UK, Apr. 18-21.

10. Delrieu, G., L. Bonnifait, **P.E. Kirstetter** and B. Boudevillain: Error model for quantitative precipitation estimates in a Mediterranean context.
IAHS Publ. 351-86 at the Weather Radar and Hydrology symposium (WRaH2011), Exeter, UK, Apr. 18-21.

9. Kacimi, S., N. Viltard , **P.E. Kirstetter**: Optimization of a rain retrieval algorithm using microwave data from satellite.
European General Assembly, Vienne, Austria, 2011.

8. **P.E. Kirstetter**, Nicolas Viltard et Marielle Gosset: Validation of satellite-retrieved vertical profiles of rainfall using ground_based radars.
Poster presentation at the Third AMMA International Conference, Ouagadougou, Burkina Faso, July 2009.

7. Gosset, M., M. Adamou, **P.E. Kirstetter**: Variety of Mesoscale Convective Systems and variability of rainfall structure observed in Benin: consequences for precipitation estimation.
Third AMMA International Conference, Ouagadougou, Burkina Faso, July 2009.

6. Guy Delrieu, Brice Boudevillain, John Nicol, Benoît Chapon, **P.E. Kirstetter**, Hervé Andrieu et Dominique Faure: Bollène 2002 Experiment: Radar quantitative precipitation estimation in the Cévennes-Vivarais region, France.
Proceedings and oral presentation at the Weather Radar and Hydrology symposium (WRaH2008), Grenoble, France, March 2008.

5. **P.E. Kirstetter**, Guy Delrieu et Brice Boudevillain: Toward an error model for radar quantitative precipitation estimation in the Cévennes-Vivarais Region, France.
Proceedings and oral presentation at the Weather Radar and Hydrology symposium (WRaH2008), Grenoble, France, March 2008.

4. **P.E. Kirstetter** et Hervé Andrieu: Identification of vertical profiles of reflectivity from volume scan radar data: adaptation of an inverse method to rainfall typing.
Proceedings and poster presentation at the Weather Radar and Hydrology symposium (WRaH2008), Grenoble, France, March 2008.

3. **P.E. Kirstetter**, Guy Delrieu, Brice Boudevillain et Alexis Berne: Toward an error model for radar QPE in the Cévennes-Vivarais region.
Proceedings and oral presentation at the Fourth European Conference on Radar in Meteorology and Hydrology (ERAD), Barcelone, Spain, September 2006.

2. Brice Boudevillain, Guy Delrieu, Benoît Chapon, **P.E. Kirstetter**, John Nicol et Hervé Andrieu: The Bollène-2002 experiment: innovative algorithms and evaluation of processing strategies for radar QPE in the Cévennes-Vivarais region.
Proceedings and oral presentation at the Fourth European Conference on Radar in Meteorology and Hydrology (ERAD), Barcelone, Spain, September 2006.

1. Alexis Berne, Brice Boudevillain, **P.E. Kirstetter** et Guy Delrieu: Spatial and temporal structure of intense Mediterranean precipitation.
Proceedings and oral presentation at the Fourth European Conference on Radar in Meteorology and Hydrology (ERAD), Barcelone, Spain, September 2006.