

## Curriculum Vitae (John Mejia)

### Academic credentials

2002-2008: PhD Meteorology, University of Oklahoma, Cooperative Institute for Mesoscale Meteorological Studies/NSSL/NOAA. Dissertation: *Relationship of Moisture Surges and Convection in the North American Monsoon System Core Region*.

2000-2002: MSc in Water Resources Management, University of Colombia at Medellin. Thesis: *Genesis of Mesoscale Convective Systems over Colombia and the Eastern Tropical Pacific Ocean diagnosed from TRMM and the NCEP/NCAR Reanalysis*.

1993-1999: BS Civil Engineering National University of Colombia at Medellin. Thesis: "*Crossing Properties in River Discharge Time Series*".

### Research Positions

2017 – present (Teaching) Associate Research Professor, Physics Department, University of Nevada, Reno, NV, Atmospheric Sciences Program, University of Nevada, Reno, NV.

2017 – present (Research) Associate Research Professor, Department of Atmospheric Sciences, Desert Research Institute, Reno, NV. Climate Modeling and Environmental Impacts; Regional Modeling and Air Pollution; Coupled Ocean-Atmosphere Regional Climate Model.

2011 – 2017 (Teaching) Assistant Research Professor, Physics Department, University of Nevada, Reno, NV, Atmospheric Sciences Program, University of Nevada, Reno, NV.

2011 – 2017 (Research) Assistant Research Professor, Department of Atmospheric Sciences, Desert Research Institute, Reno, NV. Climate Modeling and Environmental Impacts; Regional Modeling and Air Pollution; Coupled Ocean-Atmosphere Regional Climate Model.

Oct 2009: Postdoctoral Fellow at the Desert Research Institute. Development and application of Regional Climate Models for present and future climate projections.

Jan 2009: Postdoctoral Research Associate at the Cooperative Institute for Mesoscale Meteorological Studies/NOAA/National Severe Storms Laboratory. Data assimilation applications and numerical simulations using Weather Research and Forecasting (WRF) model. Development and implementation of 4-dimensional data assimilation of special field experiment observations. Parallel programming and cluster computing experience using MPI in Fortran and C++.

2007-2008: MSD- IASCLIP: Understand interactions between the trade wind and topography in their effects on the mid-summer drought (MSD) over Central America and the Caribbean region. Document detailed structure and distribution of cloud and rainfall associated with the MSD as functions of the trade wind. In situ observations of wind from pilot balloons and radiosondes are compared to the NCEP North American Regional Reanalysis (NARR). Michael Douglas (PI).

2006-2008: NAMMA: Research assistant collaborating on the reactivation and organizational aspect of the upper air observation network in western Africa for the NASA African Monsoon Multidisciplinary Analyses (NAMMA) campaign. Member of the forecasting team for the NASA DC-8 aircraft missions during NAMMA. Currently working in understanding mesoscale structure and cloud features in developing and non-developing tropical storms in the eastern Tropical Atlantic. Michael Douglas (PI).

2004-2007: NAME: Participated in the planning and execution of the North American Monsoon Experiment (NAME). Participation during the field campaign includes: Meteorology scientist during CISESE research cruise ship activity; deployment of the pilot balloon network (22 new sites); and member of the forecasting team and part of the research crew of the NOAA WP-3D (ten flights). Michael Douglas (PI).

2002-2005: SALLJEX: Participated in the execution of the South American Low-Level Jet Experiment (SALLJEX). Different activities involved: NOAA WP-3D aircraft mission (data manipulation and research crew for onboard analysis); planning and execution of other two attached mesoscale field campaigns in the Andes altiplano during SALLJEX (Uyuni and Titicaca's diurnal circulations). Michael Douglas (PI).

2000 –March 2002: Research Engineer for the "Hydrological Atlas of Colombia", Supported by UPME (Unit of Energetic Mining Management). GIS developer, production of long-term quantitative precipitation estimates for Colombia, and development and evaluation of Land-Atmosphere models.

1998 –March 2002: Research Engineer in the project: "Benefits of incorporating ENSO forecasts into reservoir operation and hydroelectric power distribution procedures". A collaborative research project P. Waylen (University of Florida), S. Laporte (Instituto Costarricense de Electricidad), Cesar Caviedes (University of Florida.), Claudia Candanedo (Instituto de Recursos Hidráulicos de Panamá). Supported by Inter-american Institute to the Research of the Climatic Change.

1998-1999: Research assistant in the project: "Water Budget in Colombia", Supported by UPME (Unit of Energetic Mining Management, Colombia) and COLCIENCIAS (Colombian Institute for the science and Technology development).

1998-1999: Research assistant in the project: "Inventory and Water Budget of Antioquia", Phase I, Supported by Antioquia Council for Science and Technology, Colombia.

## **Complementary studies**

2015: **NASA Applied Remote Sensing Training (ARSET)**: Satellite Remote Sensing of Particulate Matter Air Quality: Data, Tools, Methods and Applications.

2015: **SMOKE and CMAQ training**. Community Modeling and Analysis System Center Institute for the Environment, University of North Carolina, Chapel Hill.

2011: **Junior Faculty Leadership**. NM EPSCoR Program, Jemez Springs, New Mexico, Jan, 2011.

2009: **Parallel Programing and Cluster Computing Faculty**: Programming and curriculum development and adaptation of parallel computing to undergraduate teaching and research. SC Education Program, Norman, Oklahoma, August 9-15, 2009.

2008: **Professional Development for Geosciences Faculty**: Preparing for an Academic Career in Geosciences. On the Cutting edge professional development program, July, 2008, Norman, Oklahoma.

2001: **Essential Aspects of Tropical Meteorology - EXPANA 2001**; Michael Douglas and NOAA/OGP; Panama City Panama.

1999: **Climate Forecasting**; Nicholas Graham; Medellin, Colombia.

1997: **International Encounter of Hydrology and Climatology**; Instructors: Vijay K Gupta, Cecile Penland, Rafael Brass, Stefan Hastenrath, Lilian Posada; Medellin Colombia.

1996: **Tropical Climatology**; Instructor: Stefan Hastenrath; Medellin, Colombia.

## **Teaching Experience**

Fall, 2017: Instructor Atmospheric Modeling Class, Atmospheric Science Graduate Program, University of Nevada at Reno.

*J. Mejia*

Nov, 2016: Lecturer course on Regional Climate Modeling (WRF), Instituto Nacional de Ecología y Cambio Climático (INECC), Secretaria de Medio Ambiente y Recursos Naturales and Universidad Autonoma de Mexico (UNAM). Mexico City, MX.

June, 2016: Instructor Introduction to Atmospheric Modeling (Graduate Level), National University of Colombia, Medellin, Colombia.

March 13, 2015: Addressing Modeling Uncertainty over Western U.S. Hydroclimate Projections (Invited talk), IIHR—Hydroscience & Engineering, University of Iowa, Iowa, City, Iowa.

Since 2011: Graduate research committee: Johanna Yopez (PhD; Chair); Dan McEvoy (PhD; Chair); Dan Saucedo (MSc; Chair); Sandra Theiss (PhD); Matt Fearon (PhD); Nick Nausler (PhD); David Simeral (PhD); Ehnsan Erfani (PhD); Ashton Montrone (PhD); Ashok Pokarel (PhD); Angela M. Rendon (PhD); Liliana Jaramillo (MSc; co-chair)

Spring 2013: Instructor Atmospheric Modeling Class, Atmospheric Science Graduate Program, University of Nevada at Reno

Fall 2012: Science Advisor (MetEd module): Preparing Hydroclimate Inputs for Climate Change in Water Resource Planning, The COMET program/University Corporation for Atmospheric Research, CCAWWG, Aug 2012.

Spring 2012: Instructor Climate Modeling Class, Atmospheric Science Graduate Program, University of Nevada at Reno

Mentor Independent Studies, Climate Variability, Atmospheric Science Graduate Program Student, Spring 2011.

Co-Instructors : Climate Modeling. 3rd Annual EPSCoR Western Consortium Tri-State Meeting, April 6th-8th, 2011, Santa Ana Pueblo, New Mexico, USA.

Fall 2011: Guest lecturer Advanced Geography-Biogeography: Climate-Change Ecology, Regional Climate Modeling: Introduction", University of Nevada at Reno.

Fall 2010: Instructor Applied Data Analysis class, Atmospheric Sciences Graduate Program, University of Nevada at Reno.

Summer 2010: Guest lecturer "Interdisciplinary Modeling: Water Related Issues and Changing Climate course". Climate Modeling and Scale Issues. University of Nevada at Reno.

Spring 2010: Co-Instructor Atmospheric Turbulence class, Atmospheric Sciences Graduate Program, University of Nevada at Reno.

Summer 2008: Instructor. Mesoscale Modeling for Air Quality Applications (48 hours) – Environmental Research Group (GIA), Graduate School of Environmental Science, Universidad Pontificia Bolivariana (UPB), Medellin, Colombia.

Summer 2007: Co-mentor, Research Experiences for Undergraduates (REU) at NSF/NSSL Stefanie Henry, while completing undergraduate program in Meteorology in Iowa State University and Bo Tan, while completing his undergraduate studies in Embry-Riddle Aeronautical University.

Summer 2005: Co-mentor, Research Experiences for Undergraduates (REU) at NSF/NSSL Rebekah LaBar, while completing undergraduate program in Geography from Central Washington University.

2001-2002: Co-mentor, Research Experiences for Undergraduates (REU), Paola Arias, Luis Fernando Salazar, and Sara Viera, while completing undergraduate program in Civil Engineering in the National University of Colombia.

2001: Semester II: Teaching Assistant Geographic Information Systems (GIS), National University of Colombia, at Medellin.

1999: Semesters I and II: Teaching Assistant Open channel flow laboratory, National University of Colombia, at Medellin.

1998: Semesters I and II: Teaching Assistant Fluid Mechanics Laboratory, National University of Colombia, at Medellin.

### **Invited Talks**

Mejia J. F. 2017: Atmospheric Modeling for Air Pollution Problems, Workshop on Atmospheric Pollution and its impact on human health, agriculture and natural ecosystems: a mathematical modeling perspective. September 25-27, 2017

Mejia J. F. 2017: Improvement of the multimodel super-ensemble technique for seasonal forecasts. Servicio Nacional de Hidrología y Meteorología (SENAHMI). Lima, Peru.

Mejia J. F. and Eric Wilcox 2017: Long Range Weather Forecasting: Improvement of the multimodel super-ensemble technique for seasonal forecasts. Fifth Annual California Utility Forecasting Meeting (CUFM'17) - June 12th, 2017 - San Diego

Mitchell, D. J. Mejia, 2017: The Seasonal Cycle of Arctic Cirrus Clouds and Its Possible Relevance to Jet Steam Dynamics, Fourth Santa Fe Conference on Global & Regional Climate.

Mejia J. F. 2016: Modelos Climáticos Regionales: Diseño de Experimentos Numéricos, Métodos de Evaluación y Aplicaciones, Centro de Ciencias de la Atmósfera, UNAM, May 7, 2016.

Mitchell D. L, Anne Garnier, John Mejia, Melody A Avery, Ehsan Erfani, 2016: The Dependence of Homo- and Heterogeneously Formed Cirrus Clouds on Latitude, Season and Surface-type based on a New CALIPSO Remote Sensing Method, Atmospheric Sciences: Microphysical and Macroscopic Properties of Ice Clouds and Mixed-Phase Clouds: Linking In Situ Remote Sensing Observations and Multiscale Models, AGU Fall Meeting, December 2016.

Mejia J.F., 2016: Eulerian and Lagrangian modeling coupling and applications, National University of Colombia, Medellin, Facultad de Mindas, Medellin, Colombia, Oct 11, 2016.

Mejia J. F., 2015: Addressing Modeling Uncertainty over Western U.S. Hydroclimate Projections, IIHR—Hydroscience & Engineering, University of Iowa, Iowa City, Iowa. Mar 2, 2015.

McEvoy D., M. Hobbins, J. Huntington, J. Mejia, C. Hain, M. Anderson, J. Verdin, 2014: Exploring the use of physically based evaporative demand anomalies to improve seasonal drought prediction, (Invited talk: Hydroclimatic Extremes: Drought, AGU fall meeting, Dec-2014.

Mejia, J. F., Koracin, D., 2011: Climate modeling: From global climate models to regional climate applications. University of Nevada at Las Vegas, Climate Change Seminar Series: [http://digitalscholarship.unlv.edu/climate\\_change](http://digitalscholarship.unlv.edu/climate_change)

Mejia, J. F., 2010: Climate and Air Quality Modeling capabilities at DRI. Development of Potential collaborations with Colombian research and education institutions. Talk I. DRI: Air Quality Modeling – National University of Colombia; Talk II. DRI: RCM activities –Institute for Hydrology, Meteorology and Environmental Studies (IDEAM). Aug, 2010.

### **Book Chapters**

Dorman C.E., **Mejia J.**, Koračin D., McEvoy D. (2017) Worldwide Marine Fog Occurrence and Climatology. In: Koračin D., Dorman C. (eds) *Marine Fog: Challenges and Advancements in Observations, Modeling, and Forecasting*. Springer Atmospheric Sciences. Springer, Cham  
[https://doi.org/10.1007/978-3-319-45229-6\\_2](https://doi.org/10.1007/978-3-319-45229-6_2)

Mesa, O., Poveda, G., Vélez, J. I., Barco, J., Botero, B., Cuartas, A., Hoyos, C., Mantilla, R., **Mejía, J. F.**, Montoya, M. & others, "Balances hidrológicos de Colombia," in *Oferta y demanda del recurso hídrico: memorias del evento*, Universidad Nacional de Colombia, 2000.  
[http://koha.ideam.gov.co/cgi-bin/koha/opac-detail.pl?biblionumber=59014&query\\_desc=kw%2Cwrdl%3A%20Balances%20hidrol%C3%B3gicos%20de%20Colombia](http://koha.ideam.gov.co/cgi-bin/koha/opac-detail.pl?biblionumber=59014&query_desc=kw%2Cwrdl%3A%20Balances%20hidrol%C3%B3gicos%20de%20Colombia)

## Publications

Ru Chen, Julie L. McClean, Sarah T. Gille, Elena Yulaeva, Ivana Cerovecki, Tony Craig, Darko Koracin, Mathew Maltrud, Travis McCord, John Mejia, Myrl Hendershott, 2018: Effect of atmospheric forcing resolution on the ocean model fidelity on sea level variability in the North Pacific, Submitted to Ocean Modelling.

Leonardo Hernandez-Espinoza, Robert S. Nowak, John F. Mejia, 2018: A semi-mechanistic model of assimilation rate for *Bromus tectorum*, Submitted to Photosynthetica.

Leonardo Hernandez-Espinoza, John F. Mejia, and Robert S. Nowak, 2018: Estimated assimilation rate and seasonal carbon gain of *Bromus tectorum* in the western United States, In preparation, to be Submitted to J. of Biogeography.

Emile Elias, Darren James, Albert Rango, Caiti Steele, Ryann Smith, John F. Mejia, 2015: The impact of climate change on water quality of snowmelt-dominated watersheds of the Upper Rio Grande basin, *Journal of Hydrology: Regional Studies*, Submitted

Montrone, A., Laurel Saitob, Peter J. Weisberg, Meredith Gosejohand, Mirte Iubelte, Kyle Merriamf, and John F. Mejia, 2016: Climate Change Impacts on Vernal Pool Hydrology and Vegetation in Northern California, Accepted *Journal of Hydrology*.

Nicholas John Nauslar, Ph.D.; Timothy Brown; Michael Kaplan; John F. Mejia; Benjamin Hatchett: Examining the North American Monsoon's impact on wildfire activity in the southwest United States, *International Journal of Climatology*, <https://doi.org/10.1002/joc.5899>

Katja Trachte, Rolando Céleri, Esteban Samaniego, Joerg Bendix, Cristóbal Albuja and John F. Mejia, (2018): "Climatology and Teleconnections of Mesoscale Convective Systems in an Andean Basin in Southern Ecuador: The Case of the Paute Basin," *Advances in Meteorology*. <https://doi.org/10.1155/2018/4259191>.

**Mejia JF**, Koracin D, Wilcox EM. Effect of coupled global climate models sea surface temperature biases on simulated climate of the western United States. *Int J Climatol*. 2018;1–18. <https://doi.org/10.1002/joc.5817>

Posada-Marín José A., Angela M. Rendón, **John F. Mejía**, Juan F. Salazar, Juan Camilo Villegas, 2017: WRF downscaling improves ERA-Interim representation of precipitation representation during El Niño over tropical Andean valleys during El Niño: Implications for climate change projections, *Clim Dyn* (2018).  
<https://doi.org/10.1007/s00382-018-4403-0>

Dorman Clive, **John F. Mejia**, Darko Koračin, Daniel McEvoy: Worldwide 57-year Climatology of Marine Fog based on ship observations, submitted to *IJOC*.

**Mejia John F.**, Marco Giordano, Eric Wilcox, 2017: Conditional Summertime Day-Ahead Solar Irradiance Forecast, *Solar Energy*, Volume 163, 15 March 2018, Pages 610–622, <https://doi.org/10.1016/j.solener.2018.01.094>.

**Mejia J. F.** and Frank McDonough, 2016: WRF simulations for 8 storms that produced seedable clouds and precipitation over the Upper Colorado River Basin, A report to Colorado Water Conservation Board and Wilson Water Group, Desert Research Institute, 53 pp.

**Mejia J. F.** and Frank McDonough, 2016: Lagrangian Particle Tracking Dispersion and Regional Climate Modeling; ed. F. McDonough, **J. F. Mejia**, K. N. Shourd, R. W. Carroll, A. D. Lutz, J. Dean, J. W. Juchter, A. W. Huggins, and M. L. Kaplan, 2016: Weather Modification–Laramie Range Siting and Design-Level III Study, A report to Wyoming Water Development Office, Desert Research Institute. Sept- 2016. 167 pp.

Douglas M. W., Rahama Beida, **John F. Mejia**, Marcia Fuentes, 2016: Developing a high spatial resolution cloud climatology from MODIS imagery for biogeographical applications, *Frontiers of Biogeography*, 8 (3), <https://doi.org/10.21425/F58329532>

Jaramillo, L., G. Poveda, **J. F. Mejia**, 2016: Mesoscale Convective Systems and other Precipitation Features over the Tropical Americas and Surrounding Seas as seen by TRMM, *International Journal of Climatology*. *International Journal of Climatology*, January 2017, DOI: 10.1002/joc.5009.

Mejia J. F. and Frank McDonough, 2016: Create high-resolution WRF simulations for 8 storms that produced seedable clouds and precipitation over the Upper Colorado River Basin, Colorado Water Conservation Board and Wilson Water Group, Technical Report, Desert Research Institute, 53 pp.

Mejia J. F. and Frank McDonough, 2016: Lagrangian Particle Tracking Dispersion and Regional Climate Modeling; ed. F. McDonough, J. F. Mejia, K. N. Shourd, R. W. Carroll, A. D. Lutz, J. Dean, J. W. Juchter, A. W. Huggins, and M. L. Kaplan, 2016: Weather Modification–Laramie Range Siting and Design-Level III Study, Wyoming Water Development Office, Technical Report, Desert Research Institute. Sept- 2016. 167 pp.

Douglas M. W., Rahama Beida, John F. Mejia, Marcia Fuentes, 2016: Developing a high spatial resolution cloud climatology from MODIS imagery for biogeographical applications, *Frontiers of Biogeography*, 8(3), <https://doi.org/10.21425/F58329532>

Jaramillo, L., G. Poveda, J. F. Mejia, 2016: Mesoscale Convective Systems and other Precipitation Features over the Tropical Americas and Surrounding Seas as seen by TRMM, *International Journal of Climatology*. *International Journal of Climatology*, January 2017, DOI: 10.1002/joc.5009.

Elias, E., Rango, A., Steele, C. M., Mejia, J. F., Baca, R., James, D., Gronemeyer, P. (2016). Simulated impact of climate change on hydrology of multiple watersheds using traditional and recommended snowmelt runoff model methodology. *Journal of Water and Climate Change*, jwc2016097, DOI: 10.2166/wcc.2016.097

Hatchett B, D. Koracin, J. F. Mejia, Douglas Boyle, 2016: Assimilating urban heat island effects into climate projections, *Journal of Arid Environments*, (128) , May 2016, Pages 59-64, ISSN 0140-1963, <http://dx.doi.org/10.1016/j.jaridenv.2016.01.007>.

McEvoy, D. J., J. L. Huntington, **J. F. Mejia**, and M. T. Hobbins, 2016: Improved seasonal drought forecasts using reference evapotranspiration anomalies, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL067009.

**Mejia, J. F.**, Michael W. Douglas, Peter J. Lamb, 2015: Observational Investigation of Relationships between Moisture Surges and Mesoscale-to-Large Scale Convection during the North American Monsoon, *Int. J. Climatol.*, doi: 10.1002/joc.4512.

Elias E., A. Rango, C. Steele, and **J. F. Mejia**, 2015: Assessing climate change impacts on water availability of snowmelt-dominated basins of the Upper Rio Grande Basin, *Journal of Hydrology: Regional Studies*, 3, 525–546, doi:10.1016/j.ejrh.2015.04.004.

**Mejia, J. F.**, Fenstermaker, L.F., Etyemezian, V. R., Miller, J. J., Jiang, P., Nikolich, G., Gillies, J. A., Lomeli-Urbe, E. A. (2015). Strategies for climate change adaptation at the Armstrong (formerly Dryden) Flight Research Center and within the Mojave Desert Region, A report to NASA AFRC

Backes Tracy M., Michael L. Kaplan, Rina Schumer, and **John F. Mejia**, 2015: A Climatology of the Vertical Structure of Water Vapor Transport to the Sierra Nevada in Cool Season Atmospheric River Precipitation Events. *J. Hydrometeorol*, 16, 1029–1047. doi: <http://dx.doi.org/10.1175/JHM-D-14-0077.1>

**Mejia, J. F.**, J. Huntington, R. G. Niswonger, 2014. Uncertainty Transfer in Modeling Layers: From GCM to downscaling to hydrologic surface-groundwater modeling. Ames, D.P., Quinn, N.W.T., Rizzoli, A.E. (Eds.), *Proceedings of the 7th International Congress on Environmental Modelling and Software*, June 15-19, San Diego, California, USA. ISBN: 978-88-9035-744-2  
<http://www.iemss.org/society/index.php/iemss-2014-proceedings> (Peer reviewed)

Daniel J. McEvoy, **John F. Mejia**, and Justin L. Huntington, 2014: Use of an Observation Network in the Great Basin to Evaluate Gridded Climate Data. *J. Hydrometeorol*, 15, 1913–1931.  
doi: <http://dx.doi.org/10.1175/JHM-D-14-0015.1>

Dorman C. E., **J. F. Mejia**, D. Koračin, 2013: Impact of U.S. west coastline inhomogeneity and synoptic forcing on winds, wind stress, and wind stress curl during upwelling season, *Journal of Geophysical Research: Oceans*, 118, 7

**Mejia, J. F.**, J. Huntington, B. Hatchett and D. Koracin, R. G. Niswonger, 2012: Linking Global Climate Models to an Integrated hydrologic model using a Hybrid Downscaling Approach, *J. of Contemporary Water Res. and Edu.*, 147. ISSUE 147, PAGES 17-27, MARCH 2012

Mace, Thomas H., Lynn Fenstermaker, **John Mejia**, Jack Gillies, Vicken Etyemezian and Julie Miller, 2012, NASA DFRC Climate Change Adaptation Workshop Summary Report, white paper.

**Mejia, J. F.**, Michael W. Douglas, Peter J. Lamb, 2010: Aircraft Observations of the 12–15 July 2004 Moisture Surge Event during the North American Monsoon Experiment. *Mon. Wea. Rev.*, 138, 3498–3513. doi: 10.1175/2010MWR3228.1

Douglas, M. W., **J. F. Mejia**, N. Ordinola, and J. Boustead, 2009: Synoptic Variability of Rainfall Along The Northern Peruvian Coast During the 1997-8 El Niño Event, *Mon. Wea. Rev.*, 137, 116–136.

**Mejia, J. F.** and M. W. Douglas, 2008: Relationship of TEWs and spatial-temporal variability of MCSs in the North American Monsoon Region, *Clivar Exchanges - NAME*, Number 39 (Vol. 2, No. 1), April 2008.

Timothy J. Killeen, Michael Douglas, Trish Consiglio, Peter M. Jørgensen, **John Mejia**: 2007: Dry and Wet Spots in the Andean hotspots. *J. of Biogeogr.*, 34, 1357-1373.

**Mejia, J. F.** and G. Poveda, 2005: Atmospheric Environments of Mesoscale Convective Systems over Colombia during 1999 using TRMM radar and microwave products and NCEP/NCAR reanalysis. *Rev. Acad. Colomb. Cienc.*, 29 (113): 495-514. ISSN 0370-3908. (In Spanish)

Poveda, G., J. I. Velez, O. J. Mesa, L. A. Cuartas, O. J. Barco, R. I. Mantilla, **J. F. Mejia**, C. D. Hoyos, J. M. Ramirez, B. A. Botero, M. I. Montoya, L. I. Ceballos, M. D. Zuluaga, J. D. Giraldo, and D. I. Quevedo, 2007: Linking Long-term Water Balances and Statistical Scaling to Estimate River Flows along the Drainage Network of Colombia. *J. Hydrologic Engrg.*, Volume 12, Issue 1, pp. 4-13 (January/February 2007)

Poveda, G., and **J. F. Mejía**, 2004: Special Scaling Properties of Mesoscale Convective Systems over Colombia and Eastern Pacific based on 1998 data from TRMM mission. *Avances en Recursos Hidráulicos*, No. 11, 131-143. (In Spanish)

Celeste Saulo, Lorena Ferreira, **John Mejia** and Marcelo Seluchi, 2004: Description of the Chaco Low characteristics using SALLJEX special observations, *Clivar Exchanges - SALLJEX*, Number 29 (Vol. 9, No. 1), March 2004.

Poveda Germán, Carlos D. Hoyos, **J. Mejía**, Luis F. Carvajal, Oscar J. Mesa, Adriana Cuartas and Janeth Barco, 2002: Non-linear forecasting of monthly mean streamflow in Nare river, Antioquia-Colombia. *AVANCES*, No. 8. September. (In Spanish)

Poveda Germán, Jaime I. Vélez, Oscar Mesa, Carlos Mesa, Carlos D. Hoyos, **J. Mejia**, Olga J. Barco and Paula L. Correa, Oct 2002: Influence of macro-climate phenomena over the hydrological annual cycle of Colombia: linear and non-linear quantification and probabilistic percentiles. *METEOROLOGÍA COLOMBIANA*, No. 6. (In Spanish)

Poveda German, Oscar José Mesa, Luis F. Carvajal, Carlos D. Hoyos, **J. Mejia**, Adriana Cuartas, A. Pulgarín, Oct 2002: Forecasting monthly mean streamflows in the Colombian river using non-linear methods. *METEOROLOGÍA COLOMBIANA*, No. 6. (In Spanish)

Poveda German, Jorge M. Ramírez, **John Mejía** & Carlos D. Hoyos, Oct 2002: Multi-scaling extreme values, detection of intermittency using wavelets and evidence of deterministic chaos in the wind dynamics over the Central Amazon region. *METEOROLOGÍA COLOMBIANA*, No. 6. (In Spanish)

Jaime Ignacio Vélez, Germán Poveda Jaramillo, Carlos David Hoyos, Luis F. Salazar & **J. Mejía**, Oct 2002: Land-atmosphere coupled model for monthly streamflow over Colombia. *METEOROLOGÍA COLOMBIANA*, No. 6. (In Spanish)

Jaime Vélez, Germán Poveda, Carlos Hoyos, Luis Salazar & **J. Mejía**, Oct 2002: Different methodologies to estimate the Intensity-Duration-Frequency Relationship in Colombia, *METEOROLOGÍA COLOMBIANA*, No. 6. (In Spanish)

**John Mejía**, María I. Montoya y María V. Vélez: Drought indicator: strength and duration using daily mean streamflow and analyses of the traditional duration curve around ENSO phenomenon. *AVANCES* No. 7. November, 2000. (In Spanish)

Janet Barco, Adriana Cuartas, Oscar Mesa, Germán Poveda, Jaime I. Vélez, Ricardo Mantilla, **John Mejía**, Carlos Hoyos, Blanca Botero y María I. Montoya, 2000: Estimation of the evapotranspiration field in Colombia (In Spanish). *AVANCES* No. 7. November.

**Mejía, J. F.**, Oscar mesa, Germán Poveda, Jaime Vélez, Carlos Hoyos, Ricardo Mantilla, Janet Barco, Adriana Cuartas, María Montoya, Blanca Botero, 1999: Spatial Distribution of the Annual and Semiannual Cycles of Precipitation in Colombia (In Spanish) . *DYNA* 127. August.

## Conferences and Scientific Meetings

Dorman, C.E., **J. Mejia**, D. Koračín, 2018: Fog Trend and Interannual-to-Decadal Variability. Presented at the Canadian Meteorological and Oceanographic Society Congress, 2018 June 10-14. Halifax. <https://congress.cmos.ca/index.html>

Yepes Johanna, Germán Poveda, John F. Mejía, Leswis Cabeza, and Carolina Rueda, 2016: CHOCO-JEX: A Research Programme Focused on the CHOCO Low-level Jet over the Far Eastern Pacific and Western Colombia, EGU Leonardo Conference - Series on the Hydrological Cycle, Ourense, Spain, DOI: 10.13140/RG.2.2.36532.65925



- Mitchell, D. L., Garnier, A., Mejia, J. F., Avery, M., 2017: The seasonal cycle of Arctic cirrus clouds and its possible relevance to jet stream dynamics. Fourth Santa Fe Conference on Global and Regional Climate Change: Santa Fe, NM, February 5, 2017-February 10, 2017.
- Mitchell, D. L., Mejia, J. F., Garnier, A., Avery, M., 2017: A potential radiative forcing error from the cirrus cloud pre-exiting ice assumption. CESM Atmosphere Model Working Group (AMWG) Annual Meeting. CESM Atmosphere Model Working Group (AMWG) Annual Meeting: National Center for Atmospheric Research, February 27, 2017-March 1, 2017
- Chen, C., Ahmad, S., **Mejia, J.**, and Kalra, A., 2016: Study of Lehman Creek Watershed's Hydrologic Response to Climate Change Using Downscaled CMIP5 Projections. World Environmental and Water Resources Congress 2016: pp. 508-517. doi: 10.1061/9780784479872.052
- Mohammed Mujtaba Shareef, Tahir Husain, **John F. Mejia** and Badr Alharbi, 2016: Identifying Appropriate chemical mechanisms for photochemical air quality modeling in arid regions. Air & Waste Management Association, (940) 20-23, 2016.
- Elias E, James D, Rango A, Steele C, Smith R, **Mejia J.** 2015. Tools for adaptation and mitigation of climate change on southwestern working-lands. New Mexico Water Conference. Taos, NV, 10/2015.
- Wilcox, E.M., **Mejia, J. F.**, Shan, Y., Giordano, M. (2016). Solar Irradiance Forecasting, Solar Energy-Water-Environment Nexus in Nevada Annual Meeting: Reno, March 14, 2016-March 15, 2016
- Douglas M., **John Mejia**, Rahama Beida: Developing MODIS-based cloud climatologies for biogeographical applications Current procedures and next steps, 8th biennial conferencia internacional biogeography society, Jan 2017, Tucson, AZ
- Rendón Angela, José A Posada, Juan F. Salazar, **John Mejia**, Juan Villegas, 2016: WRF Improves Downscaled Precipitation During El Niño Events over Complex Terrain in Northern South America: Implications for Deforestation Studies, AGU Fall Meeting, December 2016.
- Mitchell D. L. Anne Garnier, **John Mejia**, Melody A Avery, Ehsan Erfani, 2016: Insights on the Feasibility, Modeling and Field Testing of Cirrus Cloud Thinning from Satellite Remote Sensing, AGU Fall Meeting, December 2016.
- Mohammed Mujtaba Shareef, Tahir Husain, **John F. Mejia** and Badr Alharbi, 2016: Identifying Appropriate chemical mechanisms for photochemical air quality modeling in arid regions. Air & Waste Management Association, (940) 20-23, 2016.
- McEvoy DJ, Hobbins MT, Huntington JL, **Mejia JF.** 2015: Exploring the use of physically based evaporative demand anomalies to improve seasonal drought prediction. Nevada Water Resources Association Annual Conference. Reno, NV, 26-29, January. (Poster: 2nd place prize student posters)
- McEvoy D., M. Hobbins, J. Huntington, **J. Mejia**, C. Hain, M. Anderson, J. Verdin, 2014: Exploring the use of physically based evaporative demand anomalies to improve seasonal drought prediction, (Invited talk: Hydroclimatic Extremes: Drought, AGU fall meeting, Dec-2014.
- Yepes Johanna, **John F. Mejia**, German Poveda, 2015: Choco and Caribbean low-level jets: observations and sensitivity analysis in regional climate models. US Clivar, Climate Variability and Predictability program, *Observing and Modeling Climate Variability in the Interameric Seas, Impacts in the Continental Americas and Caribbean*, Virtual workshop, Aug, 2015.
- Mejia J. F.** and T. McCord, 2015: A Modeling Study of Aug-Sept 2013 California Wildfire Smoke Plume Dispersion: Air quality effects over Lake Tahoe/Reno area. Tahoe Science Conference: **Air Quality in the Tahoe Basin and Sierra Nevada: Implications for People and Ecosystems**. September, 2015
- Mitchell, D. L., S. Mishra, J. Comstock, U. Lohmann, M. Kuebbeler, **J. Mejia**, D. Turner and P. Rasch, 2014: Relevance of the negative Twomey effect for cirrus clouds. 94th Annual Meeting of the American Meteorological Society, Atlanta, Georgia, 6 February 2014.
- McEvoy D. J. and **J. F. Mejia**, 2014: Regional Climate Simulations of Cold Season Precipitation Over the Great Basin, Regional Climate Modeling Part I, AMS-2014
- Dorman C., **J. Mejia**, D. Koracin, D. McEvoy, 2014: Interaction of the Marine Atmosphere, Coastal Topography and Sea Surface Temperature on Marine Fog Distribution Along the West Coast of North America: Atmosphere, Biosphere, Land, and Ocean Interactions, AGU fall meeting, Dec-2014.

Emile Elias, A. Rango, C. Steele, **J. Mejia**, R. Baca, D. James, S. Schrader, 2014: Simulated Impact of Climate Change on Hydrology of Multiple Watersheds Using Traditional and Recommended Snowmelt Runoff Model Methodology, Advancing Hydrologic Predictions in Snow- and Glacier-Fed River Systems, AGU fall meeting, Dec-2014.

Dorman C. E., **J. Mejia**, D. Koracin, and D. McEvoy, 2014: Long Term Increase In Fog Occurrence Over The NW Pacific And NW Atlantic Fog Maximums, Decadal-Multidecadal variability in Pacific and Atlantic basins Posters, AMS annual meeting 2014, Atlanta, GA.

Douglas M.W., B. Rahama, **J. F. Mejia**, 2014: A very high resolution Cloud Climatology of Mexico, Union Geofisica Mexicana (Mexican Geophysical Union), Puerto Vallarta on Nov 3.

Sauceda, D. and **J. Mejia**, 2013: Surface Temperature and Diurnal Analyses of the Urban Heat/Cool Island in the Las Vegas Metropolitan Area. Climate Change Science for Effective Resource Management and Public Policy in the Western United States (NSF/EPSCoR workshop). Las Vegas, NV.

**Mejia, J. F.**, V. Etyemezian, L. Fenstermaker, J. Miller and G. Nikolich, (2014): Climate Change Impacts at NASA ARMSTRONG (Dryden) flight research Center, NASA CASI/ROSES 4th Annual Climate Adaptation Workshop, 23-24, January, 2014

Mitchell David, **John Mejia**, Miriam Kubbeler, Ulrike Lohmann, Subhashree Mishra and Jennifer Comstock, 2013: Constraining the Negative Twomey Effect for Cirrus Clouds, GORDON RESEARCH CONFERENCE: RADIATION AND CLIMATE, July, 2013

Mitchell David L., **J. Mejia**, M. Kuebbeler, U. Lohmann, and M. Xiao, 2013: Seeding of Cirrus Clouds to Reduce Global Warming. Applications of Numerical Models to Weather and Climate Modification, 19th Conference on Planned and Inadvertent Weather Modification, 93rd American Meteorological Society Annual Meeting, Jan 5-10, 2013.

Sauceda Dan O., **J. Mejia** and J. Huntington, 2013: Vulnerability and Resilience of Urban Water Systems under Uncertain Climate Change Scenarios, 25th Conference on Climate Variability and Change, 93rd American Meteorological Society Annual Meeting, Jan 5-10, 2013.

Koracin Darko, **J. Mejia**, K. C. King, and C. E. Dorman, 2013: Upwelling and Coastal Climate, Climate Trends and Projections in the Coastal Environment—Part I, 11th Symposium on the Coastal Environment, 93rd American Meteorological Society Annual Meeting, Jan 5-10, 2013.

Perryman Nyssa M. and **J. Mejia**, 2013: Atmospheric Rivers in Regional Climate Models for the Western U.S, 25th Conference on Climate Variability and Change, 93rd American Meteorological Society Annual Meeting, Jan 5-10, 2013.

**Mejia, J. F.** and N.M. Perryman, 2012; Climatological Impact of Atmospheric River Based on NARCCAP and DRI-RCM Datasets, Findings From Climate Change Assessments: Posters From the US National Climate Assessment and the North American Regional Climate Change Assessment Program, AGU Fall Meeting, San Francisco, CA.

Darko Koracin, Benjamin Hatchett, Clive E. Dorman, Ivana Cerovecki, Jinhua Jiang, Ramesh Vellore, **J. F. Mejia**; Travis McCord, 2012: Air-sea Interaction over the Kuroshio Current during a Cold-air Outbreak, Boundary Layer Processes in the Climate System, AGU Fall Meeting, San Francisco, CA.

Steele C. M., Albert Rango, **J. F. Mejia**, 2012: Application of the Snowmelt Runoff Model to explore the effects of climate warming on streamflow in the headwaters of the Upper Rio Grande, Diagnosing Modeling Deficiencies and the Recent Advances in Monitoring, Measuring, and Modeling Snow Processes, AGU Fall Meeting, San Francisco, CA.

Hatchett B. J., Clive E. Dorman, Jinhua Jiang, Michael Kaplan, Darko Koracin, **J. F. Mejia**, Travis McCord, R. Vellore, 2012: Midtropospheric Response to a Siberian Cold Air Outbreak over the Kuroshio Current in the Pacific Basin, Dynamics and Predictability of Midlatitude Storms in a Changing Climate, AGU Fall Meeting, San Francisco, CA.

**Mejia J.** and D. Koracin, 2011: Numerical Weather Prediction and a Lagrangian Stochastic Simulation of Dispersion and Transport of Radiation Plume from Japan's Fukushima Nuclear Reactors Explosions. Effective Collaboration: Risk

*J. Mejia*

Communications and Data Sharing, Conference of Radiation Control Program Directors May 16, 2011, EPA, Center for Radiation Information and Outreach.

Amela Jericevic, Darko Koracin, **John Mejia**, Judith Chow, John Watson, Eric Fujita and Hiroaki Minoura, May-2012, Integrated approach for analysis of the nonlinear interactions of pollutants in coastal areas due to climate change, ITM - NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application.

Hatchett B. J., **J. F. Mejia**, J. Huntington, and D. Koracin, 2011: Evaluation of three climate downscaling techniques in forcing a coupled hydrological model in a snow-dominated watershed in the Lake Tahoe basin, 91st American Meteorological Society Annual Meeting, Seattle, WA.

**Mejia J.**, D. Koracin, E. M. Wilcox, and K. E. Kunkel, 2011: Assessment of AOGCM biases for RCM applications over the Great Basin in the western U.S, 91st American Meteorological Society Annual Meeting, Seattle, WA.

Koracin, D., **J. Mejia**, C. E. Dorman, and K. E. Kunkel, 2011: A study of inter-annual variability of U.S. West Coast upwelling zones with ENSO and PDO indices using high-resolution regional climate modeling, 91st American Meteorological Society Annual Meeting, Seattle, WA.

K.C. King, **J. F. Mejia** and D. Koracin: Analysis of skill and uncertainty in regional climate models, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

Darko Koracin, **J. F. Mejia**, K. E. Kunkel, and C. E. Dorman, 2011: Coastal climate and upwelling, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

Andrew Joros and **J. F. Mejia**, 2011: Impact of Eastern and Central Pacific ENSO events over the Continental United States, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

D. Koracin, R. Vellore, and **J. Mejia**, and J. Jiang, C. E. Dorman, I. Cerovecki, J. McClean, and M. C. Hendershott, 2012, Mesoscale atmospheric and ocean dynamics over Kuroshio Extension region: AGU-OSLO-Ocean. Soc., Ocean Sciences Meeting, Salt Lake, Utah.

**Mejia John F.**; Kristien C. King; Darko Koracin, 2011: North American Monsoon Mean and Transient Rainfall Patterns from RCM products, AGU Fall Meeting, San Francisco.

Kristien C. King; **John F. Mejia**; Darko Koracin, 2011: Evaluation of Added Value to Precipitation Predictions using Regional Downscaling in the Western United States, AGU Fall Meeting, San Francisco.

Kristien King, **John Mejia**, Darko Koracin, Desert Research Institute: Regional Climate Modeling Efforts for the Western United States, Climate Change Science, Education, and Policy, Use of Climate Records, 3rd Annual EPSCoR Western Consortium Tri-State Meeting, April 6th-8th, 2011, Hyatt regency Tamaya resort & spa, Santa Ana Pueblo, New Mexico.

Benjamin Hatchett, **John Mejia**, Darko Koracin, Desert Research Institute: Historical Climate Data: The Never Ending Battle for Acquisition, Climate Change Science, Education, and Policy, Use of Climate Records, 3rd Annual EPSCoR Western Consortium Tri-State Meeting, April 6th-8th, 2011, Hyatt regency Tamaya resort & spa, Santa Ana Pueblo, New Mexico.

**Mejia J. F.**, Justin Huntington: Evaluation of three climate downscaling techniques in forcing a coupled hydrological model in a snow-dominated watershed in the Lake Tahoe basin, Water Resources: State and Change, 3rd Annual EPSCoR Western Consortium Tri-State Meeting, April 6th-8th, 2011, Hyatt regency Tamaya resort & spa, Santa Ana Pueblo, New Mexico.

K.C. King and **J. F. Mejia**, 2011: Optimal Combination of Statistical and Dynamical Downscaling, World Climate Research Program (WCRP) Open Science Conference 2011, Boulder, USA.

**Mejia, J. F.**, 2012: Coupled GCM SST biases and their effect on regional downscaling efforts, World Climate Research Program (WCRP) Open Science Conference 2011, Boulder, USA.

*J. Mejia*

Darko Koracin, K. C. King, **J. F. Mejia**, C. E. Dorman, and K. E. Kunkel, 2012: Current Issues and Challenges in Climate Predictions of Coastal Upwelling, 92nd American Meteorological Society Annual Meeting, 10th Symposium on the Coastal Environment (January 22-26, 2012).

**John F. Mejia** and D. Koracin, 2012: Correcting GCM SST Biases to Improve RCM Simulations Over Coastal Upwelling Dominated Regimes, 92nd American Meteorological Society Annual Meeting, 10th Symposium on the Coastal Environment (January 22-26, 2012).

Clive E. Dorman, **J. Mejia** and D. Koracin, 2012: Simulation of Atmospheric Marine Layer off Southern Oregon and Northern California, 92nd American Meteorological Society Annual Meeting, 10th Symposium on the Coastal Environment (January 22-26, 2012).

K.C. King, J. F. Mejia and D. Koracin: Analysis of skill and uncertainty in regional climate models, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

Darko Koracin, **J. F. Mejia**, K. E. Kunkel, and C. E. Dorman, 2011: Coastal climate and upwelling, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

Andrew Joros and **J. F. Mejia**, 2011: Impact of Eastern and Central Pacific ENSO events over the Continental United States, 19th Conference on Applied Climatology, 18–20 July 2011, Asheville, NC.

Hatchett B. J., **J. F. Mejia**, J. Huntington, and D. Koracin, 2011: Evaluation of three climate downscaling techniques in forcing a coupled hydrological model in a snow-dominated watershed in the Lake Tahoe basin, 91st American Meteorological Society Annual Meeting, Seattle, WA.

**Mejia J.**, and D. Koracin, E. M. Wilcox, and K. E. Kunkel, 2011: Assessment of AOGCM biases for RCM applications over the Great Basin in the western U.S, 91st American Meteorological Society Annual Meeting, Seattle, WA.

Koracin J. and **J. Mejia**, C. E. Dorman, and K. E. Kunkel, 2011: A study of inter-annual variability of U.S. West Coast upwelling zones with ENSO and PDO indices using high-resolution regional climate modeling, 91st American Meteorological Society Annual Meeting, Seattle, WA.

**Mejia J.** and Koracin D., 2010: Regional Climate Modeling: Transferability and sensitivity tests. Collaborative and Interdisciplinary Climate Change Science, 2nd Annual Tri-State Consortium Meeting, Incline Village, NV, 6-8 April, 2010.

Darko Koracin, Michael L. Kaplan, Radian Belu, Kristian Hovarth, Jinhua Jiang, Kristien C. King, Gregory D. McCurdy, Travis E. McCord, **John F. Mejia**, and Ramesh Vallore, "DRI-wind energy assessment and forecasting" (August 20, 2010). Nevada Renewable Energy Consortium Meeting. Paper 4.  
<http://digitalscholarship.unlv.edu/nvrec/2010/aug20/4>

**Mejia J.** and Koracin D., 2010: Regional Climate Modeling: Transferability and sensitivity tests. DRI/DAS Seminar, 20 April, 2010

**Mejia J.** 2010: RCM implementation and applications for the Intermountain Southwest. 11<sup>th</sup> annual WRF user's Workshop, NCAR, Boulder, CO. NSF-EPSCoR CI training grant.

**Mejia J. F.**, 2010: "Regional Climate Modeling Methodological and Experimental Designs" Annual Nevada NSF EPSCoR Climate Change Conference. Paper 45. <http://digitalscholarship.unlv.edu/epscor/2010/feb02/45>

Darko K, **J. F. Mejia** and C. E. Dorman, 2010: Climate signatures of the wind stress and wind stress curl over the U.S. West Coast, Ninth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, 26 - 30 September 2010, Annapolis, MD

Dorman C. E., **J. F. Mejia** and D. Koracin, 2010: The Response of the Offshore Atmospheric Marine Layer to Coastal Topography, 17th Conference on Air Sea Interaction, Ninth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, 26 - 30 September 2010, Annapolis, MD

*J. Mejia*

**Mejia J. F.** and M. W. Douglas, 2010: Low-level flow around the Baja California peninsula during NAME, 17th Conference on Air Sea Interaction, Ninth Conference on Coastal Atmospheric and Oceanic Prediction and Processes, 26 - 30 September 2010, Annapolis, MD

Douglas M.W, **J. F. Mejia**, and D. Enfield, 2010: Developing an enhanced climate monitoring network for the Inter-American seas region, data impact tests and observing system simulation experiments (OSSEs) II, AMS fall meeting, Atlanta.

Douglas M.W, and **J. F. Mejia**: 2010: The recent availability of low-cost radiosonde systems and their implications for adaptive sounding arrays, 15th Symposium on Meteorological Observation and Instrumentation, Network Design, AMS fall meeting, Atlanta.

Douglas M.W, and **J. F. Mejia**: 2010: Testing a low-cost radiosonde system for possible use in adaptive sounding networks, 15th Symposium on Meteorological Observation and Instrumentation,, AMS fall meeting, Atlanta.

**Mejia, J. F.**, M. W. Douglas, 2009: Relationships between Moisture Surges and Mesoscale- to Large-Scale Convection from Multi-year Satellite Imagery and North American Regional Reanalysis Data, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract, A51F-0170.

M. W. Douglas, **J. F. Mejia**, 2009: High-resolution Numerical Simulations of the North American Monsoon Core Region using WRF-ARW. Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract, H53E-0983.

**Mejia, J.**, and Douglas M., 2009: Relationships between the MJO and NAM Higher Frequency Synoptic Variability, MOCA-09, the IAMAS-IAPSO-IACS 2009 Joint Assembly, Montréal, Canada, July 19 – 29, 2009.

**Mejia, J.**, and Douglas M., 2009: Multiscale Four Dimensional Data Assimilation and Short-term Forecasting for Different NAMMA Eastern Atlantic Tropical Storm Events, MOCA-09, the IAMAS-IAPSO-IACS 2009 Joint Assembly, Montréal, Canada, July 19 – 29, 2009.

**Mejia, J.**, and Douglas M., 2009: Relationships between Gulf of California Moisture Surges and Mesoscale Convection Derived from Multi-Year Goes Imagery Archives and North American Regional Reanalysis Data, MOCA-09, the IAMAS-IAPSO-IACS 2009 Joint Assembly, Montréal, Canada, July 19 – 29, 2009.

Douglas, M and **Mejia J.**, 2008: Mapping the spatial extent of the Central American Mid-summer drought, Principal Investigators Meeting, Silver Spring, MD September 29-October 1.

**Mejia, J.**, and Douglas M., 2008: Synoptic Variability of Rainfall and Cloudiness Along the Coasts of Northern Peru and Ecuador During the 1997-8 El Niño Event, 2008 Climate Prediction Program for the Americas Principal Investigators Meeting, Silver Spring, MD September 29-October 1.

**Mejia, J.**, and Douglas M., 2008: Influence of Convective Outflows o the Gulf of California Monsoonal Low-level Flow, 2008 Climate Prediction Program for the Americas Principal Investigators Meeting, Silver Spring, MD September 29-October 1.

**Mejia J. M.**, 2008: Relationships of rainfall and synoptic weather events to urban air quality in the Valley of Aburrá, International Seminar in Air Pollution Modeling, Swedish Meteorological and Hydrological Institute (SMHI). Medellin-Colombia April 7 – 11, 2008.

**Mejia J. F.** and Douglas M., 2006: Observations and Analysis of the moisture surge of Jul 12-14th during NAME, Poster for the North American Monsoon Scientific Work Group 8, August 17-18, Tucson, AZ.

Orozco, R. K.; **Mejia, J. F.**; Galvez, J. M.; Douglas, M. W., 2006: Plausible effects of Paleolake Tauca on the altiplano circulations and rainfall from WRF model simulations, 8 th International Conference on Southern Hemisphere Meteorology and Oceanography - 8 ICSHMO, Foz do Iguacu - PR, Brazil, April 24-28.

*J. Mejia*

Douglas, M. W.; **Mejia, J. F.**; Killeen, T. J., 2006: Developing cloudiness climatologies from satellite imagery to map cloud forests and other vegetation features over the tropical Americas, 8 th International Conference on Southern Hemisphere Meteorology and Oceanography - 8 ICSHMO, Foz do Iguacu - PR, Brazil, April 24-28.

**Mejia, J. F.**, Douglas, M. W., 2006: Flow around the Andean elbow from WRF simulations and P-3 aircraft measurements during SALLJEX, 8th International Conference on Southern Hemisphere Meteorology and Oceanography - 8 ICSHMO, Foz do Iguacu - PR, Brazil, April 24-28.

Douglas, M. W.; Murillo, J.; Orozco, R. K.; **Mejia, J. F.**; Galvez, J. M., 2006: Accuracy of the Aviation Model (AVN) final analyses over Central South America based upon upper air observations collected during the SALLJEX, 8th International Conference on Southern Hemisphere Meteorology and Oceanography - 8 ICSHMO, Foz do Iguacu - PR, Brazil, April 24-28.

Michael W. Douglas and **J. F. Mejia**, J. M. Galvez, R. Orozco, and J. Murillo, 2006: The seasonal evolution of the diurnal variation of the low-level winds around the Gulf of California. Is there a link to vegetation green-up during the wet season? 18th Conference on Climate Variability and Change, 20th Conference on Hydrology, 86th /Annual AMS meeting 2006, Atlanta, GA, J3.4.

Michael W. Douglas and **J. F. Mejia** and T. Killeen, 2006: Use of MODIS and GOES imagery to help delineate the distribution of cloud forests along the eastern Andean slopes , 14th Conference on Satellite Meteorology and Oceanography, 86th /Annual AMS meeting 2006, Atlanta, GA, P3.18.

**Mejia, John F.** and M. W. Douglas, 2005: Explaining rainfall and vegetation gradients along the eastern slopes of the Bolivian Andes using SALLJEX observations and WRF simulations, 11th Conference on Mesoscale Processes, Albuquerque, NM, October-2005, P2M.5.

M. W. Douglas, Javier Murillo, J. M. Galvez, **J. F. Mejia**, R. Orozco and C. Brown, 2005: Quality control of pilot balloon data for climate monitoring , 15th Conference on Applied Climatology/13th Symposium on Meteorological Observations and Instrumentation, AMS Meetings, 20-24 June 2005, Savannah, Georgia, JP1.30.

Michael W. Douglas and **J. F. Mejia**, 2005: Intensive “porpoising” with a research aircraft to determine atmospheric structure during the SALLJEX and NAME programs, 15th Conference on Applied Climatology/13th Symposium on Meteorological Observations and Instrumentation, AMS Meetings, 20-24 June 2005, Savannah, Georgia, JP1.31.

Michael W. Douglas, J. Murillo and **J. F. Mejia**, 2005: Conducting short duration field programs to evaluate sounding site representativeness and potential climate monitoring biases—Examining the Low-Level Jet Over the Venezuelan Llanos During the 2005 Dry Season, 15th Conference on Applied Climatology/13th Symposium on Meteorological Observations and Instrumentation, AMS Meetings, 20-24 June 2005, Savannah, Georgia, JP1.32.

Michael W. Douglas, **J. F. Mejia** and N. Ordinola, 2005: Rainfall variations along the coast of Peru and Ecuador during the 1997–8 El Niño and implications for a real-time forecasting system over the region, Ninth Symposium on Integrated Observing and Assimilation Systems for the Atmosphere, Oceans, and Land Surface (IOAS-AOLS), 85th AMS Annual Meeting, San Diego, CA , J 5.2.

**Mejia J.F.** and M. Douglas, 2005: Mean structure and variability of the low-level jet across the central Gulf of California from NOAA WP-3D flight level observations during the North American Monsoon Experiment , Sixth Conference on Coastal Atmospheric and Oceanic Prediction and Processes (6COASTAL), 85th AMS Annual Meeting, San Diego, CA , J 5.8.

Michael Douglas, J. M. Galvez, **J. F. Mejia**, C. Brown, R. Orozco, C. Watts , 2005: Seasonal evolution of the sea-land breeze circulation and its role in the precipitation climatology of northwestern Mexico , Sixth Conference on Coastal Atmospheric and Oceanic Prediction and Processes (6COASTAL), 85th AMS Annual Meeting, San Diego, CA , J 3.7.

Manuel Zuluaga, Germán Poveda, **John Mejia**, 2004: Diurnal Cycle of the rainfall over Colombian and Eastern Pacific during 1998-2002 using TRMM mission products. XVI Seminario Nacional de Hidráulica e Hidrología Sociedad Colombiana de Ingenieros, Sociedad de Ingenieros del Quindío, Universidad del Quindío Corporación Autónoma Regional del Quindío Armenia 29-31/Oct de 2004. (In spanish)

Michael W. Douglas, Javier Murillo, **John F. Mejia** and Jose M. Galvez, 2004: Monitoring the Variability of Atmospheric Circulations in Latin America with the Pan American Climate Studies Sounding Network. Clivar Meeting 2004. The first International CLIVAR 2004 Science Conference, June 21-25, 2004 in Baltimore, Maryland, USA.

Michael W. Douglas, Ana G. Ulke and **John F. Mejia**, 2004: Simulating a Low-Level Jet Observed during the SALLJEX with RAMS. Clivar Meeting 2004. The first International CLIVAR 2004 Science Conference, June 21-25, 2004 in Baltimore, Maryland, USA.

Celeste Saulo, Lorena Ferreira, **John Mejia** and Marcelo Seluchi, 2004: Description of the Chaco Low Characteristics Using SALLJEX Special Observations. Clivar Meeting 2004. The first International CLIVAR 2004 Science Conference, June 21-25, 2004 in Baltimore, Maryland, USA.

Michael Douglas and J. Murillo and **J. F. Mejia**, 2004: Recent PACS-SONET observations of relevance to North American Monsoon Experiment, 26th Conference on Hurricanes and Tropical Meteorology, 4B.2.

Michael W. Douglas, **John F. Mejia**, Javier Murillo, Jose Galvez, Sep-2003: LLJ structure from NOAA WP-3D measurements during the SALLJEX, CLIVAR PANAM Meeting, Boulder CO. Poster.

Michael W. Douglas and **John F. Mejia**: Sep-2003: Special upper-air observations for the SALLJEX. CLIVAR PANAM Meeting, Boulder CO.

Michael W. Douglas, Javier Murillo, **John F. Mejia**, and Jose Galvez, Jan –2003: New directions in the Pan American Climate Studies Sounding Network for Latin America, Eighth Symposium on Integrated Observing and Assimilation Systems for Atmosphere, Oceans, and Land Surface. The 84th AMS Annual Meeting (Seattle, WA), 4.4.

G. Poveda, J. M. Ramirez, **J. F. Mejia** y C. D. Hoyos, Scaling properties of extreme values, intermittency, and Lyapunov exponents of wind and temperature dynamics of central Amazonia, II International LBA Scientific Conference, July 7-10, 2002, Manaus, Brasil.

G. Poveda, J. I. Vélez, O. Mesa, C. D. Hoyos, L. F. Salazar, **J.F. Mejia**, O. J. Barco, P. L. Correa, Influence of macro-climate phenomena over the hydrological annual cycle of Colombia: linear and non-linear quantification and probabilistic percentiles, Memorias XX Congreso Latinoamericano de Hidráulica, ISBN 959-7160-17-X, Ciudad de La Habana, Cuba, 1-5 de Octubre 2002.

J. I. Vélez, G. Poveda, O. Mesa, L.F. Salazar, S. C. Viera, **J. F. Mejía**, C. D. Hoyos, D. I. Quevedo, Different methodologies to estimate the Intensity-Duration-Frequency Relationship in Colombia, Memorias XX Congreso Latinoamericano de Hidráulica, ISBN 959-7160-17-X, Ciudad de La Habana, Cuba, 1-5 de Octubre 2002.

G. Poveda, O. J. Mesa, L. F. Carvajal, C. D. Hoyos, **J. F. Mejía**, L. A. Cuartas, A. Pulgarín, L. F. Salazar, S.C. Vieira, Forecasting monthly mean streamflows in the Colombian river using non-linear methods, Memorias XX Congreso Latinoamericano de Hidráulica, ISBN 959-7160-17-X, Ciudad de La Habana, Cuba, 1-5 de Octubre 2002.

J. I. Vélez, G. Poveda, O. Mesa, C.D. Hoyos, L. F. Salazar, **J. F. Mejía**, Land-atmosphere coupled model for monthly streamflow over Colombia, Memorias XX Congreso Latinoamericano de Hidráulica, ISBN 959-7160-17-X, Ciudad de La Habana, Cuba, 1-5 de Octubre 2002.

J. I. Vélez, O. Mesa, G. Poveda, O. J. Barco, L. A. Cuartas, R. Mantilla, C. D. Hoyos, **J. F. Mejía**, B. A. Botero, C. A. Ríos, D. I. Quevedo, J. M. Ramírez, J. D. Pérez, J. D. Giraldo, L. F. Salazar, L. I. Ceballos, M. D. Zuluaga, P. L. Correa, y S. C. Vieira, A Hydro- Climatological Atlas For Colombia. International Geographical Union Study Group on Environmental Change and Water Sustainability, Zaragoza, Spain, 2001.

G. Poveda, C. D. Hoyos, **J. F. Mejía**, L. F. Carvajal, O. J. Mesa, A. Cuartas y J. Barco, Non-linear prediction of the Colombia's hydrometeorology: Nare river. Memorias IX Congreso Latinoamericano e Ibérico de Meteorología, Buenos Aires, Argentina, 7-11 de mayo de 2001.

*J. Mejia*

**Mejia J. F.** and Poveda G., April 2001: Genesis of Mesoscale Convective Systems over Colombia using TRMM and NCEP/NCAR reanalysis, IX Congreso Latinoamericano e Iberoamericano de Meteorología VII Congreso Argentino de Meteorología.

O. Mesa, G. Poveda, J. I. Vélez, J. Barco, B. Botero, A. Cuartas, C. Hoyos, R. Mantilla, **J. F. Mejia**, M. I. Montoya. Water Budget of Colombia. Memorias Seminario Internacional Oferta y Demanda del Recurso Hídrico. Rionegro, Noviembre 1-3, 2000.

**Mejia J.F.**, Mesa O., Poveda G., Vélez J.I., Hoyos C.D., Mantilla R, Barco J., Cuartas A., Montoya M.I., Botero B. Spatial Distribution of the Annual and Semiannual Cycles of Precipitation in Colombia. *XIV SEMINARIO NACIONAL DE HIDRÁULICA E HIDROLOGÍA*, Septiembre 2000.

Oscar Mesa, Germán Poveda, Jaime I. Vélez, Janet Barco, Blanca Botero, Adriana Cuartas, Carlos Hoyos, Ricardo Mantilla, John F Mejía , María Montoya. HIDRO-SIG : a tool for hydrological analyses. *XIX CONGRESO LATINOAMERICANO DE HIDRÁULICA – CÓRDOBA 2000*.

Oscar J. Mesa, Germán Poveda, Jaime I. Vélez, Janet Barco, Adriana Cuartas, Ricardo Mantilla, Carlos D. Hoyos, **J. Mejía** , Blanca Botero y M. Isabel Montoya. Estimation of the evapotranspiration field as a basic components for the long-term water budget over Colombia. *XIX CONGRESO LATINOAMERICANO DE HIDRÁULICA – CÓRDOBA- Argentina 2000*.

Oscar J. Mesa, Germán Poveda, Jaime I. Vélez, Janet Barco, Adriana Cuartas, Ricardo Mantilla, Carlos D. Hoyos, **J. Mejía** , Blanca Botero y M. Isabel Montoya. A Digital Water Budget and Hydrologic Atlas for Colombia. *Symposium on impacts of climatic variations on water resources a focus on borders in the americas. Santa Barbara, California, EUA*. Julio de 2000.

## **Fellowships, Honors, and Awards**

2014 Peter B. Wagner Medal of Excellence for DRI Scholars in the Early Stages of Career Development: "In recognition of applications of atmospheric models to inform policy development and implementation."

2013 Outstanding Reviewer: American Society of Civil Engineers (ASCE) Journal of Water Resources Planning and Management.

Rising Start Award, Nevada, 22nd National NSF ESPCoR conference, Coeur d'Alene, Idaho, Oct-2011.

NASA Group Achievement Award. Outstanding accomplishment through the coordination of the NASA African Monsoon Multidisciplinary Analyses (NAMMA), 2008.

Member of the winner group in the first place: National Award in Environmental Sciences. Foundation Alejandro Angel Escobar. Hydrologic Atlas of Colombia. September 2007.

Awarded to the 2006-2009 Latino Achievement and Heritage Celebration Graduation/Award, University of Oklahoma. Recipient recognition for academic excellence.

Member of the winner group in the first place: National Award in Environmental Sciences. Foundation Alejandro Angel Escobar. Water Budget in Colombia. September 2000.

Fellowship recipient: Excellent students. National University of Colombia, Graduate program in Water Resources Management. Jan/2000-Feb/2002.

Scholarship recipient: Grant to develop MSc Thesis supported by the Research Bureau of the National University of Colombia (DINAIN).

Member of the winner group in the second place: Technology and Science award, Water Budget in Colombia. Secretaría de Educación y Cultura de Medellín y el Planetario de Medellín, November, 1999.



## Community Service

- 2013- Nevada Solar Energy-Water-Ecosystems Nexus Advisory Committee
- 2006-2007: Colombian Student Association (COLSA) Officer. Treasurer.
- 2005-2006: PhD representative of the Student Affairs Committee (SAC), School of Meteorology, University of Oklahoma.
- 2005-2006: Colombian Student Association (COLSA) Officer. Web Master.
- 2004-2005: International representative of the Student Affairs Committee (SAC), School of Meteorology, University of Oklahoma.

## Review Panels

- 2018- CALIPSO/CloudSat Science Operations Review Panel.
- 2014-: NSF-Nevada Solar Energy-Water-Ecosystems Nexus Advisory Committee Member
- Reviewer Scientific Report: Climate-Smart conservation putting adaptation principles into practice, National Wildlife Federation, 2013.
- 2012-: Inter-Agency Forum on Climate Change Impacts & Adaptations (NASA, DOI, and the U.S. Global Change Research Program) and Member of the NASA's Climate Adaptation Science Investigator (CASI-ROSES) Work Group
- USDA Climate Hub Regional Climate Expert (Southwest Hub).
- Reviewer Scientific Report: Lake Tahoe: Climate change research strategy for atmospheric processes, Tahoe Science Consortium, Tahoe Environmental Research Center, 2013.
- Reviewer for National Science Foundation, Division of Atmospheric Sciences.
- Reviewer for Journal of the Air & Waste Management Association
- Reviewer for Science of the Total Environment
- Reviewer for Journal of Ocean and Atmospheric Technology
- Reviewer for Journal of Applied Meteorology and Climatology
- Reviewer for Journal of Hydrometeorology
- Reviewer for Journal of Geophysical Research
- Reviewer for Journal of Water Resources Planning and Management
- Reviewer for Journal of the American Water Resources Association
- American Geophysical Union-Education Special Interest Group Member-2012-3
- NSF-EPSCoR Integrated Science Working Groups
- 10th and 11th Student World water forum, University of Nevada, Reno, 2013, 2014

## Professional Associations

- Full Member of the American Meteorological Society (AMS)
- Full Member of the American Geophysical Union (AGU)
- Full Member of the International Environmental Modelling & Software Society (iEMSS)

## Contact information for References

*Marc Pitchford:* ([Marc.Pitchford@dri.edu](mailto:Marc.Pitchford@dri.edu)); Desert Research Institute, 2115 Raggio Pkwy, Reno, Nevada. Office phone **(775) 674-7127**

*Eric Wilcox:* ([Eric.Wilcox@dri.edu](mailto:Eric.Wilcox@dri.edu)); Desert Research Institute, 2115 Raggio Pkwy, Reno, Nevada. Office phone 775-673-7686

*Michael Douglas:* ([michael.douglas@noaa.gov](mailto:michael.douglas@noaa.gov)); NWC, Norman, OK; Room# 4346. Office phone **(405) 325-6098**.

*Lance Leslie:* ([lmleslie@ou.edu](mailto:lmleslie@ou.edu)), NWC, Norman, OK; Room#5106. Office phone **(405) 325-0596**.

*German Poveda:* ([gpoveda@unalmed.edu.co](mailto:gpoveda@unalmed.edu.co)), Associate professor, Graduate School of Water Resources Management, National University of Colombia at Medellin, Colombia, P.O. BOX 1027, office phone **(011-574) 425-5122**.

*J. Mejia*

**Personal Contact Information**

Office and Mailing Address: 2215 Raggio Parkway, Reno, NV, 89512.  
Telephone: 775-673-7667  
Cellphone: 405-863-2842  
E-mail address: john.mejia@dri.edu