

Curriculum Vitae

Ivonne Mariela García Martínez

Contact Information

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Research Interests

- Dynamics of low-level jets
- Ocean-atmosphere interactions
- Predictability of regional rainfall and temperature extreme events
- Climate response to changes in anthropogenic forcing (e.g. aerosols and GHG emissions)
- Numerical modelling

Education

- 2016-2020 **The University of Edinburgh. Edinburgh, UK.**
PhD in Atmospheric and Environmental Sciences.
Thesis: Mechanisms of climate variation in the broader Mexican-United States region: the role of atmospheric circulation and anthropogenic forcing
Advisor: Dr Massimo Bollasina.
- 2012-2015 **Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Ensenada, Mexico.**
M. Sc. Physical Oceanography.
Thesis: Ocean-atmosphere variability related with the midsummer drought in the CFSR reanalysis.
Advisor: Dr Julio Sheinbaum Pardo.
- 2007-2011 **Universidad Veracruzana. Xalapa, Mexico.**
B. Sc. in Atmospheric Sciences.
Graduated by high GPA.
Advisor: Dr Adalberto Tejeda Martínez

Scholarships

PhD Scholarship from the National Council for Science and Technology (CONACyT, Mexico): 2016-2020.

Complementary PhD scholarship from the University of Edinburgh: 2016-2020.

MSc Scholarship from the National Council for Science and Technology (CONACyT, Mexico): 2012-2014.

Academic employment

- Jun 2021- **Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Ensenada, México.**
Postdoctoral researcher, Department of Physical Oceanography.

Apr 2015-Aug 2016 **Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Ensenada, México.**
Research assistant, Department of Physical Oceanography.

Mar 2011-Jul 2012 **Universidad Veracruzana. Xalapa, México.**
Research assistant, Applied Climatology Group.

Skills

Programming: python, matlab, bash, NCO, CDO, GrADS

Version control: Git

Editing: LaTeX

Learning: WRF and high performance computing

Languages: Spanish (Native), English (Fluent), Portuguese (Basic)

Publications

García Martínez, I. M., Bollasina, M. A., and Undorf, S. (2020). Strong large-scale climate response to North American sulphate aerosols in CESM. *Environmental Research Letters*.

García Martínez, I. M. and Bollasina, M. A. (2020). Sub-monthly evolution of the Caribbean low-level jet and its relationship with regional precipitation and atmospheric circulation. *Climate Dynamics*.

Tejeda Martínez, A., Fitzjarrald, D. R., Pérez Méndez, M., Domínguez Eusebio, C. A., Álvarez Pérez, J. A., Baruch Vera, A., **García Martínez, I.**, Quiroz Amoroso, J. N., Limón Ramírez, A. R. (2020). Ciclos diurnos y circulación local. Un laboratorio natural del clima: la interacción costa-montaña en el centro del Golfo de México, 46-91. Editors: Tejeda Martínez, A., Pérez Méndez, M., Méndez Pérez, I. R. Universidad Veracruzana.

Tejeda Martínez, A., **García-Martínez, I. M.**, Méndez-Pérez, I. R., Miranda-Miranda, U., & López-Méndez, J. V. (2015). Radiación solar en México (*Solar radiation in Mexico*). *Prontuario solar de México*, 51-68. Editors: Gómez-Azpeitia, G. & Tejeda Martínez, A. Universidad de Colima-Universidad Veracruzana, Colima.

Tejeda Martínez, A., **García-Martínez, I. M.**, Gómez-Azpeitia, G., Méndez-Pérez, I. R., & González-Viveros, P.J. (2015). Procedimientos simples para la estimación de radiación Solar en México (*Simple procedures for the estimation of solar radiation in Mexico*). *Prontuario solar de México*, 103-112. Editors: Gómez-Azpeitia, G. & Tejeda Martínez, A. Universidad de Colima-Universidad Veracruzana, Colima.

Manuscript reviews

Climate Dynamics

International Journal of Climatology

Participation in conferences and other academic activities

Annual Meeting of the Mexican Geophysical Union (UGM). Vallarta, Mexico, November 2-8, 2019. Evolución sub-mensual del jet de bajo nivel del Caribe y su relación con la precipitación en México. **García Martínez, I. M.** and M. Bollasina. Oral presentation.

Annual Meeting of the Mexican Geophysical Union (UGM). Vallarta, Mexico, November 2-8, 2019. Aerosoles antropogénicos de norteamérica como modificadores del clima mexicano. **García Martínez, I. M.** and M. Bollasina. Poster.

ICTP Summer School on Theory, Mechanisms and Hierarchical Modelling of Climate Dynamics: Multiple Equilibria in the Climate System. Trieste, Italy, 25 June- 5 July 2018. At International Center for Theoretical Physics.

European Geosciences Union (EGU) General Assembly. Vienna, Austria, April 8-13, 2018. Sub-monthly variability of the Caribbean Low-Level Jet and its relationship to precipitation and atmospheric circulation in Mexico and Central America. **García-Martínez I.M.** & M. Bollasina. Poster.

GOTHAM Summer School: Global Teleconnections in the Earth's Climate System – Processes, Modelling and Advanced Analysis Methods. Potsdam, Germany, 18-22 September 2017. At Potsdam Institute for Climate Impact Research.

Virtual workshop of the Climate Variability and Predictability Program (US CLIVAR): Observing & Modelling Climate Variability in the Intra-Americas Seas & Impacts on the Continental Americas & the Caribbean. September 9-11, 2015. *Ocean-atmosphere variability related with the midsummer drought in the CFSR reanalysis*. **García Martínez, I. M.** and J. Sheinbaum. Poster.

Annual Meeting of the Mexican Geophysical Union (UGM). Vallarta, Mexico, November 2-8, 2014. Variabilidad Océano-atmósfera asociada a la sequía intraestival en el reanálisis CFSR (*Ocean-atmosphere variability related with the midsummer drought in the CFSR reanalysis*). **García Martínez, I. M.** and J. Sheinbaum. Oral presentation.

XXII Alpine Summer School. Dynamics, Stochastics and Predictability of the Climate System. Valsavarenche, Valle d'Aosta, Italy, June 9-18, 2014.

Annual Meeting of the Mexican Geophysical Union (UGM). Vallarta, Mexico, October 28-November 2, 2012. Modelo Empírico para la estimación de la radiación difusa horaria en condiciones despejadas para la ciudad de Xalapa (*Empirical model for the estimation of the hourly diffuse radiation during clear-sky conditions in Xalapa city*). López-Velázquez, E. & **García-Martínez I.M.** Poster.

XVI Congresso Brasileiro de Meteorologia. Belém do Pará, Brazil. September 13-17, 2010. Análisis de la temperatura mínima registrada en la temporada invernal 2009-2010 en la región X Golfo Centro, México (*Analysis of the minimum temperature in the 2009-2010 Winter season in the Gulf-Central Mexico region*). **García-Martínez, I. M.**, Gómez, G., González, P., Jofre, R., Muñiz C., & Nava, R. Oral presentation.