

# CURRICULUM VITAE



## 1. Identification

**Full Name:** Micael Amore Cecchini

**Birth Date:** 19 October 1987 (34 years old)

**Nationality:** Brazilian and Italian

**E-mail:** [micael.cecchini@gmail.com](mailto:micael.cecchini@gmail.com)

**Cell Phone:** +1 (970) 914-1937

### Online Profiles:

- Personal webpage: <https://micaelcecchini.wixsite.com/aboutme>
- ORCID: <https://orcid.org/0000-0002-0219-2857>
- ResearcherID: <http://www.researcherid.com/rid/C-6103-2015>
- Google Citations: <https://scholar.google.com.br/citations?user=rH-AWNAAAAAJ&hl=pt-BR>
- Research Gate: [https://www.researchgate.net/profile/Micael\\_Amore\\_Cecchini](https://www.researchgate.net/profile/Micael_Amore_Cecchini)

## 2. Education

Year	Title	Institution	Supervisor
2010	BSc in Meteorology	University of São Paulo (USP), Brazil	-
2013	MSc in Meteorology	National Institution for Space Research (INPE), Brazil	Luiz Augusto Toledo Machado
2017	PhD in Meteorology	National Institute for Space Research (INPE), Brazil	Luiz Augusto Toledo Machado

### 3. Professional experience

2008 – 2009	Internship at the “SOMAR Meteorologia” company
2012 – 2013	Meteorologist at the “Climatempo” company
2017 – 2020	Post-Doctoral Fellow at University of São Paulo (USP) Supervisor: Maria Assunção Faus da Silva Dias
2018 – 2018	International Post-Doctoral Internship at the National Center for Atmospheric Research (NCAR) Supervisor: Andrew Heysfield
2020 – 2021	Post-Doctoral Fellow at University of São Paulo (USP) Supervisor: Paulo Eduardo Artaxo Netto
2021-	Post-Doctoral Fellow at Colorado State University (CSU) Supervisor: Christine Chiu

Reviewer for scientific journals:

2015-present	Journal of the Atmospheric Sciences
2016-present	Atmospheric Research
2017-present	Revista Brasileira de Meteorologia
2018-present	Bulletin of the American Meteorological Society
2019-present	Geophysical Research Letters

### 4. Awards

2018	“Prêmio CAPES de Tese” – Brazilian national award of best PhD Thesis in Geosciences defended in 2017
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### 5. Publications

Quantitative indexes

- Source: Web of Science ResearcherID C-6103-2015 – 21 March 2022):  
<https://publons.com/researcher/2430543/micael-a-cecchini/>
  - Number of publications: 16
  - Total times cited: 229
  - h-index: 7

- Source: Google Scholar
  - Total times cited: 316
  - h-index: 8
  - i10-index: 8

## Publication list

### Publications in review:

- **Cecchini, M. A.**, Heymsfield, A. J., Honeyager, R., Field, P., Machado, L. A. T. and Silva Dias, M. A. F.: Revisiting the hail radar reflectivity-kinetic energy flux relation by combining T-matrix and Discrete Dipole Approximation calculations to size distribution observations, *J. Atmos. Sci.*, in review, 2022.
- **Cecchini, M. A.**, de Bruine, M., Vilà-Guerau de Arellano, J., and Artaxo, P.: Quantifying vertical wind shear effects in shallow cumulus clouds over Amazonia, *Atmos. Chem. Phys. Discuss.* [preprint], <https://doi.org/10.5194/acp-2021-1060>, in review, 2022.

## Book chapters

2022

- Vila, D. A., Oliveira, R. A. J., Biscaro, T. S., Mattos, E. V., and **Cecchini, M. A.**: Chapter 18 - Cloud processes of the main precipitating systems over continental tropical regions, in: *Precipitation Science*, edited by: Michaelides, S., Elsevier, 561–614, <https://doi.org/10.1016/B978-0-12-822973-6.00019-6>, 2022.

## Papers published in peer-reviewed journals

2022

- Correia, A. L., Mendonça, M. M., Nobrega, T. F., Pugliesi, A. C., and **Cecchini, M. A.**: A Multi-Year Study of GOES-13 Droplet Effective Radius Retrievals for Warm Clouds over South America and Southeast Pacific, 13, <https://doi.org/10.3390/atmos13010077>, 2022.

2021

- Hernández Pardo, L., Machado, L. A. T., Morrison, H., **Cecchini, M. A.**, Andreae, M. O., Pöhlker, C., Pöschl, U., Rosenfeld, D., Venzasco, E. P., Voigt, C., Wendisch, M., and Pöhlker, M. L.: Observed and Simulated Variability of Droplet Spectral Dispersion in Convective Clouds Over the Amazon, *J. Geophys. Res.-Atmos.*, 126, e2021JD035076, <https://doi.org/10.1029/2021JD035076>, 2021.

- Machado, L. A. T., Franco, M. A., Kremper, L. A., Ditas, F., Andreae, M. O., Artaxo, P., **Cecchini, M. A.**, Holanda, B. A., Pöhlker, M. L., Saraiva, I., Wolff, S., Pöschl, U., and Pöhlker, C.: How weather events modify aerosol particle size distributions in the Amazon boundary layer, *Atmos. Chem. Phys.*, 21, 18065–18086, <https://doi.org/10.5194/acp-21-18065-2021>, 2021.

2020

- **Cecchini, M. A.**, Silva Dias, M. A. F., Machado, L. A. T., Morales, C. A., and Biscaro, T.: Macro- and microphysical characteristics of convective rain cells observed during SOS-CHUVA. *Journal of Geophysical Research: Atmospheres*, 125, e2019JD031187. <https://doi.org/10.1029/2019JD031187>, 2020.
- Mei, F., Wang, J., Comstock, J. M., Weigel, R., Krämer, M., Mahnke, C., Shilling, J. E., Schneider, J., Schulz, C., Long, C. N., Wendisch, M., Machado, L. A. T., Schmid, B., Krisna, T., Pekour, M., Hubbe, J., Giez, A., Weinzierl, B., Zoeger, M., Pöhlker, M. L., Schlager, H., **Cecchini, M. A.**, Andreae, M. O., Martin, S. T., de Sá, S. S., Fan, J., Tomlinson, J., Springston, S., Pöschl, U., Artaxo, P., Pöhlker, C., Klimach, T., Minikin, A., Afchine, A., and Borrmann, S.: Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA, *Atmos. Meas. Tech.*, 13, 661–684, <https://doi.org/10.5194/amt-13-661-2020>, 2020.

2019

- Hernández Pardo, L., Toledo Machado, L. A., **Cecchini, M. A.**, and Sánchez Gácita, M.: Quantifying the aerosol effect on droplet size distribution at cloud top, *Atmos. Chem. Phys.*, 19, 7839–7857, <https://doi.org/10.5194/acp-19-7839-2019>, 2019.
- Yeom, J. M., Yum, S. S., Mei, F., Schmid, B., Comstock, J., Machado, L. A. T., **Cecchini, M. A.**: Impact of secondary droplet activation on the contrasting cloud microphysical relationships during the wet and dry seasons in the Amazon, *Atmospheric Research*, 230, <https://doi.org/10.1016/j.atmosres.2019.104648>, 2019.

2018

- Andreae, M. O., Afchine, A., Albrecht, R., Holanda, B. A., Artaxo, P., Barbosa, H. M. J., Borrmann, S., **Cecchini, M. A.**, Costa, A., Dollner, M., Fütterer, D., Järvinen, E., Jurkat, T., Klimach, T., Konemann, T., Knote, C., Krämer, M., Krisna, T., Machado, L. A. T., Mertes, S., Minikin, A., Pöhlker, C., Pöhlker, M. L., Pöschl, U., Rosenfeld, D., Sauer, D., Schlager, H., Schnaiter, M., Schneider, J., Schulz, C., Spanu, A., Sperling, V. B., Voigt, C., Walser, A., Wang, J., Weinzierl, B., Wendisch, M., and Ziereis, H.: Aerosol characteristics and

particle production in the upper troposphere over the Amazon Basin, *Atmos. Chem. Phys.*, 18, 921–961, <https://doi.org/10.5194/acp-18-921-2018>, 2018.

- Machado, L. A. T., Calheiros, A. J. P., Biscaro, T., Giangrande, S., Silva Dias, M. A. F., **Cecchini, M. A.**, Albrecht, R., Andreae, M. O., Araujo, W. F., Artaxo, P., Borrmann, S., Braga, R., Burleyson, C., Eichholz, C. W., Fan, J., Feng, Z., Fisch, G. F., Jensen, M. P., Martin, S. T., Pöschl, U., Pöhlker, C., Pöhlker, M. L., Ribaud, J.-F., Rosenfeld, D., Saraiva, J. M. B., Schumacher, C., Thalman, R., Walter, D., and Wendisch, M.: Overview: Precipitation characteristics and sensitivities to environmental conditions during GoAmazon2014/5 and ACRIDICON-CHUVA, *Atmos. Chem. Phys.*, 18, 6461–6482, <https://doi.org/10.5194/acp-18-6461-2018>, 2018.

2017

- **Cecchini, M. A.**, Machado, L. A. T., Andreae, M. O., Martin, S. T., Albrecht, R. I., Artaxo, P., Barbosa, H. M. J., Borrmann, S., Fütterer, D., Jurkat, T., Mahnke, C., Minikin, A., Molleker, S., Pöhlker, M. L., Pöschl, U., Rosenfeld, D., Voigt, C., Weinzierl, B., and Wendisch, M.: Sensitivities of Amazonian clouds to aerosols and updraft speed, *Atmos. Chem. Phys.*, 17, 10037–10050, <https://doi.org/10.5194/acp-17-10037-2017>, 2017.
- **Cecchini, M. A.**, Machado, L. A. T., Wendisch, M., Costa, A., Krämer, M., Andreae, M. O., Afchine, A., Albrecht, R. I., Artaxo, P., Borrmann, S., Fütterer, D., Klimach, T., Mahnke, C., Martin, S. T., Minikin, A., Molleker, S., Pardo, L. H., Pöhlker, C., Pöhlker, M. L., Pöschl, U., Rosenfeld, D., and Weinzierl, B.: Illustration of microphysical processes in Amazonian deep convective clouds in the gamma phase space: introduction and potential applications, *Atmos. Chem. Phys.*, 17, 14727–14746, <https://doi.org/10.5194/acp-17-14727-2017>, 2017.
- Jäkel, E., Wendisch, M., Krisna, T. C., Ewald, F., Kölling, T., Jurkat, T., Voigt, C., **Cecchini, M. A.**, Machado, L. A. T., Afchine, A., Costa, A., Krämer, M., Andreae, M. O., Pöschl, U., Rosenfeld, D., and Yuan, T.: Vertical distribution of the particle phase in tropical deep convective clouds as derived from cloud-side reflected solar radiation measurements, *Atmos. Chem. Phys.*, 17, 9049–9066, <https://doi.org/10.5194/acp-17-9049-2017>, 2017.

2016

- **Cecchini, M. A.**, Machado, L. A. T., Comstock, J. M., Mei, F., Wang, J., Fan, J., Tomlinson, J. M., Schmid, B., Albrecht, R., Martin, S. T., and Artaxo, P.: Impacts of the Manaus pollution plume on the microphysical properties of Amazonian warm-phase clouds in the wet season, *Atmos. Chem. Phys.*, 16, 7029–7041, <https://doi.org/10.5194/acp-16-7029-2016>, 2016.
- Wendisch, M., Pöschl, U., Andreae, M. O., Machado, L. A. T., Albrecht, R., Schlager, H., Rosenfeld, D., Martin, S. T., Abdelmonem, A., Afchine, A., Araújo, A., Artaxo, P., Aufmhoff, H., Barbosa, H. M. J., Borrmann, S., Braga, R., Buchholz, B., **Cecchini, M. A.**, Costa, A., Curtius, J., Dollner, M., Dorf, M.,

Dreiling, V., Ebert, V., Ehrlich, A., Ewald, F., Fisch, G., Fix, A., Frank, F., Fütterer, D., Heckl, C., Heidelberg, F., Hüneke, T., Jäkel, E., Järvinen, E., Jurkat, T., Kanter, S., Kästner, U., Kenntner, M., Kesselmeier, J., Klimach, T., Knecht, M., Kohl, R., Kölling, T., Krämer, M., Krüger, M., Krisna, T. C., Lavric, J. V., Longo, K., Mahnke, C., Manzi, A. O., Mayer, B., Mertes, S., Minikin, A., Molleker, S., Münch, S., Nillius, B., Pfeilsticker, K., Pöhlker, C., Roiger, A., Rose, D., Rosenow, D., Sauer, D., Schnaiter, M., Schneider, J., Schulz, C., de Souza, R. A. F., Spanu, A., Stock, P., Vila, D., Voigt, C., Walser, A., Walter, D., Weigel, R., Weinzierl, B., Werner, F., Yamasoe, M. A., Ziereis, H., Zinner, T., Zöger, M.: The ACRIDICON-CHUVA campaign: Studying tropical deep convective clouds and precipitation over Amazonia using the new German research aircraft HALO. *Bull. Am. Meteorol. Soc.*, 97, 10, 1885-1908, <http://dx.doi.org/10.1175/BAMS-D-14-00255.1>, 2016.

2014

- **Cecchini, M.A.**, Machado, L.A.T., Artaxo, P.: Droplet size distributions as a function of rainy system type and cloud condensation nuclei concentrations. *Atmospheric Research*. Available online 10 March 2014, ISSN 0169-8095, <http://dx.doi.org/10.1016/j.atmosres.2014.02.022>, 2014.

## 6. Student supervision

2021

Undergrad studies

- Student: Guido Giovanelli Haytzmann
  - Institute of Physics, University of São Paulo

## 7. Teaching

2014

- Teaching training
  - Course: ACA0522 – Meteorologia Sinótica I (Synoptic Meteorology I)
  - Institute of Astronomy, Geophysics and Atmospheric Sciences
  - University of São Paulo

2017

- Teaching training
  - Course: ACA0324 – Meteorologia Física I (Physical Meteorology I)

- Institute of Astronomy, Geophysics and Atmospheric Sciences
- University of São Paulo

2019

- Co-lecturer
  - Course: ACA0324 – Meteorologia Física I (Physical Meteorology I)
  - Institute of Astronomy, Geophysics and Atmospheric Sciences
  - University of São Paulo