



# Iván Mauricio Cely Toro

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*PhD student in Physics*

*"Success consists of going from failure to failure without loss of enthusiasm"*

*Winston Churchill*

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## Personal Information

**Date of Birth** November 2<sup>nd</sup>, 1990. Bogotá.

**Nacionality** Colombian

**Genre** Male

**Optional e-mail** mauriciocelytoro@gmail.com

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## Research Interests

Atmospheric Physics. The structure and dynamics of processes occurring in weakly stable boundary layers. Stratified turbulence, nocturnal boundary layer, atmospheric turbulence.

**Programming Languages** <R, L<sup>A</sup>T<sub>E</sub>X, NCL, Fortran>

**Working platform** <Linux/Unix, MS windows.>

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## Education

2018 - Pres. **PhD student in Physics**, UNIVERSIDADE FEDERAL DE SANTA MARIA, Santa Maria - RS., Brazil.

Topic: The structure and dynamics of processes occurring in weakly stable boundary layers. Supervisor: Luca Mortarini, PhD in Physics.

2016 - 2018 **Master in Physics**, UNIVERSIDADE FEDERAL DE SANTA MARIA, Santa Maria - RS., Brazil.

Dissertation Topic: *"Dynamics of energy and CO<sub>2</sub> fluxes in agricultural systems with crop rotation in southern Brazil using the eddy covariance method"*. Advisor: Débora Regina Roberti, PhD in Physics.

2008 - 2015 **Degree on Physics**, UNIVERSIDAD DISTRITAL FRANCISCO JOSÉ DE CALDAS, Bogotá, Colombia.

Thesis title: *"Protocol to obtain images from biological samples using the SEM"*. Advisor: Esperanza del Pilar Infante Luna, PhD in Physics.

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## Scientific Research Experience

- 2018 - Pres. **Member of Atmospheric turbulence group (GR $\mu$ TA), UNIVERSIDADE FEDERAL DE SANTA MARIA, Santa Maria, Brazil.**
- 2016 - 2018 **Researcher in micrometeorology laboratory, UNIVERSIDADE FEDERAL DE SANTA MARIA, Santa Maria, Brazil.**
- 2013 - 2015 **Researcher on FIACIBI team, UNIVERSIDAD DISTRITAL FRANCISCO JOSÉ DE CALDAS, Bogotá, Colombia.**  
Member of the research team in Applied Physics on biological sciences at the Universidad Distrital.

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## Honours and Awards

- 2018 **Doctoral scholarship, Organization of American States, Fellowship PAEC OAS-GCUB 2017, Partnerships Program for Education and Training (PAEC) between the Organization of American States (OAS) and the Coimbra Group of Brazilian Universities (GCUB).**  
Universidade Federal de Santa Maria - Brazil
- 2016 - 2018 **Master scholarship, Organization of American States, Fellowship PAEC OAS-GCUB 2015, Partnerships Program for Education and Training (PAEC) between the Organization of American States (OAS) and the Coimbra Group of Brazilian Universities (GCUB).**  
Universidade Federal de Santa Maria - Brazil
- 2008 - 2012 **Honours, UNIVERSIDAD DISTRITAL FRANCISCO JOSÉ DE CALDAS. Faculty of Sciences and Education. Department of Physics, Bogotá, Colombia.**  
Special acknowledgment for a good academic performance during that period.

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## Languages

		Understanding		Conversation		Writing
		Listening	Reading	Interaction	Production	Grammar
Spanish	<Native>	-	-	-	-	-
English	<Intermediate>	<i>Basic</i>	<i>Upper</i>	<i>Middle</i>	<i>Middle</i>	<i>Upper</i>
Portuguese	<Upper-intermediate>	<i>Upper</i>	<i>Upper</i>	<i>Upper</i>	<i>Middle</i>	<i>Middle</i>
Italian	<Basic>	<i>Basic</i>	<i>Basic</i>	<i>Elementary</i>	<i>Elementary</i>	<i>Elementary</i>

## Certificates

- 2017 **Celpe-Bras, Portuguese, Level: Upper-intermediate.**
- 2016 **TOEFL ITP (BPT), Inglés, Score: 500.**
- 2015 **Berlitz Proficiency Test(BPT), Level: A1.**
- 2014 **International Test of English Proficiency(iTEP), Level: B1.**
- 2013 **Berlitz Proficiency Test(BPT), Level: B1.**
- 2012 **Teaching and Tutoring (T&T) College of Colombia, Level: B2.**

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## Teaching Experience

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2013 - 2015 **Maths teacher**, *COLEGIO AGUSTINIANO NORTE*, Bogotá, Colombia.  
Teacher of mathematics during 3 years with excellent feedback.

2012 **Extra Help Tutor in the Modern Physics I and Classical Mechanics I courses**, *UNIVERSIDAD DISTRITAL FRANCISCO JOSÉ DE CALDAS*, Bogotá, Colombia.  
Taught Physics 70 classes for 1 semester with excellent feedback.

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## Publications

### Articles

- [1] Tiago Bremm, Ivan Mauricio Cely-Toro, Gustavo Pujol Veeck, Débora Regina Roberti, and Lidiane Buligon. Comparison between two footprint function models applied to the experimental site of Pedras Altas. *Ciência e Natura*, 40:199–204, 2018.
- [2] Ivan Mauricio Cely-Toro, Ricardo Acosta Gotuzzo, Débora Regina Roberti, and Jackson Ernani Fiorin. Evaluation of footprint models for fluxes analysis using the eddy-covariance technique over small areas. *Ciência e Natura*, 40:93–99, 2018.

### Conferences and Events

- [1] Ivan Mauricio Cely-Toro, Ricardo Acosta Gotuzzo, Débora Regina Roberti, and Jackson Ernani Fiorin. Evaluation of footprint models for fluxes analysis using the eddy-covariance technique over small areas. In *X Brazilian Workshop on Micrometeorology*, Santa Maria, Brazil, 11 2017. Universidade Federal de Santa Maria.
- [2] Curriculum Project of Degree in Physics. XI week of physics teaching: "the role of the experiment in the teaching and developing of physics". In *XI Week of Physics teaching*, Bogotá, Colombia, 2012. Universidad Distrital Francisco José de Caldas. Participant as an assitant.
- [3] Curriculum Project of Degree in Physics. XV week of physics teaching. In *XV Week of Physics teaching*, Bogotá, Colombia, 2012. Universidad Distrital Francisco José de Caldas. Participant as an assitant.
- [4] Ministry of Education. III cultural educational meeting of the mercosur – science, culture and technological innovation expo. In *Mercosur Cultural*, Misiones, Argentina, 2007. Argentine Republic.

**Last Updated:** *March 22, 2019*

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Dears,

I would like to express my interest in participating at the São Paulo School of Advanced Science on Atmospheric Aerosols: Properties, Measurements, Modeling, and Effects on Climate and Health (SPSAS on Atmospheric Aerosols). I am currently at the second year of my PhD's degree programme at the Federal University of Santa Maria (UFSM) in the Department of Physics and I do hold a deep interest in the most fundamental aspects of Atmospheric Physics with a goal to devote my professional career towards understanding them.

Therefore, I would be captivated to get in touch with the state-of-the-art about aerosols, their properties, impacts on health, climate and global warming by the hands of experienced researchers in the issue. In that way, it is quite evident that the experiences gained, both by the hands-on experience on topics of my interest and by the guidance of leading experts in the area, this school will be so invaluable for me and for my future endeavors. I firmly believe that curricula of the school will provide answers to my most profound and fundamental questions regarding my future as a researcher of the atmosphere. Let me correlate the knowledge acquired in the school with my field of research (data management, turbulence in planetary boundary layers, pollutant dispersion and modelling).

During my studies I have been introduced and trained on a variety of subjects including Atmospheric Diffusion, Statistical Theory of the Turbulence, Statistical Mechanics. I also have self-studied the basics of Turbulent Flows and Micrometeorology. Finally I can handle myself with the R, NCL,  $\LaTeX$  programming languages and have some experience with Fortran. Thus I firmly believe that I will be able to cope with the requirements of the SPSAS.

I am confident you will find my application as a worthwhile investment. Thank you for considering my request. I look forward to your positive response.

Yours faithfully,

**Iván Mauricio Cely Toro**

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