



Ezequiel Alvarez

PhD in Theoretical Physics

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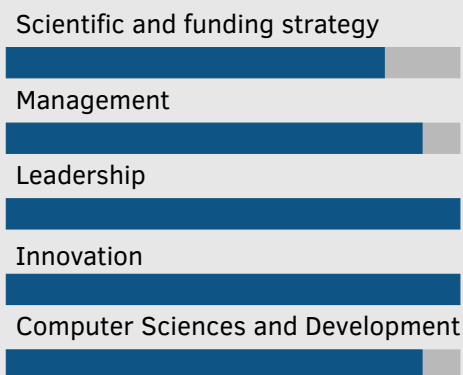
About me

I am passionate about understanding new theories and tools, and using them to find out how the Universe behaves and in applications that are useful for Society. I enjoy doing research in Machine Learning and in phenomenology in High Energy Physics to further understand Nature. I also love teaching and advising Master and PhD students.

I am the ICAS Director, where I pour important effort to maintain a high standard research and innovation Institute. With the help of all my colleagues, we are building the high quality research Institute we dreamt up.

If I had to summarize my work, my passion, my wishes, my past, my present and my future in one word, that would be: *Motivation*.

Skills



Interests

Research & Development: I based my progress and headway on a triple-engine consisting in basic research, apps development, and teaching. Since a few years ago all three are crossed by Machine Learning and each one helps grow the others. In basic research I am mainly involved in LHC High Energy Physics; in apps development I am engaged in doing Machine Learning tools to analyze big data in health, apps in Natural Language Processing for different communities, and general apps for the benefit of society; and in the academy I am highly committed in teaching Machine Learning and in organizing the Data-Science career at my University (UNSAM). I am also very interested in recent progress in all other fields of Science and I do my best to keep track of relevant news and findings in this direction.

Science Policy: I pursue science to best serve public interests. I am involved and very interested in promoting women in science; and as a fact 60% of the researchers I have formed as doctors are women. I am interested in enhancing knowledge, skills and intelligence in the Developing World as an added value for improving the quality of life as a whole.

Positions & Education

Since 2021	ICAS Director (Argentina) icas.unsam.edu.ar	(International Center for Advanced Studies)
Since 2006	Research Permanent Position Independent Researcher	CONICET (Argentina)
Since 2016	Professor Physics	University of San Martin (Argentina)
2017-2020	Latin American Representative (unique) International Committee for Future Accelerators	ICFA (International)
2012	Postdoc Stanford University	SLAC (USA)
2011-2017	Regular Associate International Centre for Theoretical Physics	ICTP (Italy)
2011-2012	Professor Physics	University of San Luis (Argentina)
2006-2014	Assistant professor Physics	University of Buenos Aires UBA (Argentina)
2006-2009	Physics Olympiad Coordinator Province management and development for the Physics Olympiad	San Luis (Argentina)
2001-2005	PhD in Theoretical Physics Thesis: <i>CP, T and CPT analyses in EPR-correlated $B^0 \bar{B}^0$ decays</i>	Valencia University (Spain)
1997-2000	Master in Theoretical Physics Prize <i>First of the Class</i>	Institute Balseiro, Bariloche (Argentina)

Research and Development (R+D)

2022	UNSAM Intelligent Dropout Program, AI development to estimate University dropout probabilities for students and the corresponding policies to avoid it
2020-	Intelligent Parliament, app for Argentina's National Congress to track speeches and topics in the Congress using Topics Model
2020-2022	Early Intelligent Alarm for COVID-19 working at Buenos Aires Health Ministry
2020-2021	Citizen Mobility Index, for National Government in collaboration with Telefónica and Movistar
2020-	IArxiv.org development, an AI tool for sorting papers according to each user preferences, used by the scientific community across the globe
2014-	Qlink.it development, an app for secure messaging across IT devices and platforms
More:	icas.unsam.edu.ar/ai

Summary of Scientific Work

- 2000-2022 42 international scientific publication in journals as JHEP, Physical Review, Nuclear Physics, Physics Letters, etc.
- 2001-2022 ~ 30 international conferences, schools, workshops, etc.
- 2008-2022 Full formation to PhD level of Dr. Estefanía Coluccio Leskow, Dr. Juan Ignacio Sanchez Vietto, Dr. Mariel Estévez, Dr. Rosa Sandá Seoane, and Dr. Manuel Szewc. Currently advising 2 more PhD students. 9 Master Thesis advised.

Languages

English	Excellent
Spanish	Native
Italian	Excellent
French	Very good