

Latinxs and Hispanics in Mathematical Sciences



Cipriano A. Santos

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Dr. Cipriano Santos has a bachelor's degree in Actuarial Science from the Universidad Nacional Autónoma de México (UNAM). He holds a Master's and Ph.D. degrees in Operations Research from the University of Waterloo in Ontario, Canada. Santos joined the Decision Technologies Team of HP Labs in Palo Alto, California, in 1989 as a member of the technical staff. During his time at HP, Santos published/presented 19 papers at top-referred journals/conferences. He has more than 30 patent applications filed, and 18 patents granted. He retired from HP in 2017 and joined Gurobi Optimization. Dr. Santos is the co-founder of the former HP Labs Advanced Prototyping Organization program in Guadalajara, Mexico. The program identified the best undergraduate and graduate STEM students from top Mexican Universities to work with researchers at HP labs and help them build lab prototypes that tackle high impact, high-risk business problems of HP.

Dr. Santos has earned the following awards: 1981 President's Excellence Award, Mexico; 2004 National award for outstanding achievement, Hispanic Engineer National Achievement Awards Conference: HENAAC; 2005 Nominated among the top 50 Hispanics in the U.S. by HITEC-Hispanic IT Executive Council; 2006 National Award from CAREERS & the disabled magazine; 2011 one million USD grant from CONACYT (Mexican National Council of Science & Technology).

He uses mathematical programming to solve complex and high-value combinatorial optimization problems for business, engineering, and science. To address the uncertainty of these problems, he also uses statistical inference, probability theory, and simulation. Dr. Santos used to give seminars and keynote talks at several universities and conferences and is open to doing it again.

Dr. Santos recommends that undergraduates wanting to work in business, industry, or government need to have a genuine interest in solving real-life problems. He says: "You need to have a practical mind, where you are willing to trade off theoretical precision for usability. You need to develop mathematical applications that do not require a Ph.D. to use it. Use your analytical thinking and mathematical rigor to develop the application, but be practical; your solution should be user-friendly and intuitive. After you have a successful application, write a paper with all the mathematical rigor and publish it. If your paper is published, you have shown that you can develop practical applications of mathematics and at the same time your paper shows theoretical value."

"I think the Hispanic Heritage Month celebrates all the important contributions that Hispanics are making to this great country of ours, the United States of America. I feel very honored by the nomination given by Lathisms and feel humbled by the others that have been nominated before me. We still have many challenges and contributions to make, but as the Mexican philosopher, Jose Vasconcelos said: --The enormity of the task should be the incentive of the greatest Will-- Strength and Honor. Pano"

Lathisms was founded in 2016 in order to showcase the contributions of Latinx and Hispanic mathematicians during Hispanic Heritage Month, which is celebrated in the United States from September 15 and October 15 every year. During this time, we feature/reveal a prominent Latinx/Hispanic mathematician daily. See all the featured mathematical scientists at LATHISMS.ORG.

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