

Mission Statement

I have the honor to stand for the position of Interdisciplinary Geosciences President. I am a mathematician teaching and doing research at the Department of Computer Science of the University of the Philippines, Diliman, and a good portion of the topics I currently explore with graduate and undergraduate students concerns natural hazards: landslide modelling, storm-surge modelling and post-disaster regeneration of mangroves. I do feel fortunate to be able to use my math training to solve problems in the sciences and engineering, and the opportunity to work with geologists, physicists, earth scientists, marine scientists, biologists and chemists!

At the Environmental Engineering Program, a graduate unit of the College of Engineering, I have the unique chance to help Ph.D. students explore the use of differential equations, stochastics, sensitivity analysis, dynamical systems and other 'tools' in their prospective thesis topics, as diverse as: groundwater flow; desalination; treatment of wastes (plastics, pharmaceuticals, phenol); and pyrolysis for coconut shells.

Just last September, 2016, I attended my first meeting as a member of the International Science Council's Regional Office for Asia and the Pacific (ICSU ROAP) Steering Group on Natural Hazards and Disaster Risk. ICSU's goal is to "strengthen international science for the benefit of society". Very easily, I can say I am right in the middle of "strengthening mathematics and computation for the benefit of the Philippines!"

IG is one of the smaller sections of AOGS, although, when we think about it, there are more disciplines outside of the geosciences, and IG should be their 'natural home'!

One immediate action we can take is to encourage our colleagues who are engineers and mathematicians who currently present in the other sections, like Atmospheric Sciences, and Hydrological Sciences to join or send papers to some of our sessions.

We can certainly reach out to more mathematicians to participate at AOGS, and I will actively invite participation at the next math conference I attend, the "5th International Conference on Random Dynamical Systems" in Wuhan, China in June 2017. I was invited to this conference, precisely because of their interest in stochastics and dynamics in geophysical applications.

We can likewise reach out to computer scientists and engineers who are working in related fields, like geodetic engineers working on GIS for land use and monitoring of various habitats.; civil engineers studying recharge for aquifers, and groundwater flows; and to the social scientists and psychologists, who can help us with disaster preparedness and response.

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