

We're resuming the Newsletter in 2023 after a gap of a year due to the continuing effects of the Covid-19 pandemic. Some of the usual Kovalevskaja Fund activities took place during that year, but in Peru and southern Africa the prize competitions were not held due to the pandemic.

* * *

TRIP TO CUBA AND KOVALEVSKAIA PRIZE EVENT

This was our (Neal and Ann's) first international trip since the beginning of the Covid pandemic. Because of our age and the alarming accounts of "long Covid," we take strong preventive measures in airplanes and airports. We wore elastomeric masks with P-100 filters during the whole way between Seattle and Havana. But as one might expect in a country that prioritizes public health and has a relatively well-educated citizenry, the Cuban population from age two up is almost fully vaccinated, and the infection and mortality rates have been extremely low for over a year. So we didn't wear the elastomeric masks once we left the José Martí Airport in Havana.

On March 14, 2023 we participated in a combined ceremony for the nine recipients of the Cuban Kovalevskaja Prizes of 2021 (see the previous *Newsletter*) and 2023 (see below). The event, which for the first time was organized by the Cuban Mathematics and Computer Science Society (CMCSS), took place in the beautiful Magna Aula at the University of Havana (UH). More than 120 people attended, and the ceremony was presided over by the Rector (President) of UH, Dr. Miriam Nicado García; the Dean of the Math and Computer Science Faculty, Dr. Wilfredo Morales Lezca; and the President of the CMCSS, Professor Luis Ramiro Piñero.

All forms of media — print, TV, and radio — were amply represented, and the event received unusually wide coverage; there are some excellent accounts and photos on the websites of La Prensa Latina and Cuba Debate. The coverage was due in part to the organizing skill of the CMCSS, and in part to March 14 being " π -day" as well as Cuban "Math Day." It was also only a few days after March 8, International Women's Day, a holiday far more celebrated in Cuba, Vietnam, Mexico, and other countries than it is in the U.S. Another factor in the extensive press coverage was the support of Dr. Nicado. She herself is a mathematician who wrote her doctoral dissertation on differential equations; she is also a member of the Central Committee of the Cuban Communist Party. We heard from our colleagues at the University of Havana that her accession to the rectorship has boosted the national visibility of mathematics and other basic sciences at the university.

The 2023 Kovalevskaja Prizes were awarded in four categories as follows:

Master's Thesis: Lisset Suárez Plasencia, an instructor in the Math and Computer Science Faculty of UH, for her work on the mathematics of detection

of weak passwords. She has already published several papers on this topic in international journals.

PhD Thesis: Dr. Iliana Pérez Pupo, an instructor at the University of Information Science, for her work on algorithms for decision-making in conjunction with machine learning. She has published over twenty articles in national and international computer science journals.

Research: Dr. Victoria Hernández Mederos is the head of the Math Department at the Institute of Cybernetics, Mathematics, and Physics of the Ministry of Science, Technology, and the Environment (CITMA). Her research concerns the many applications of “splines” for numerical solution of differential equations. Her current interests include problems of wave propagation; statistical, geometric, and differential models in biomedicine; interpolation and adjustment of data; and development of an ultrasonic system to measure blood flow in coronary shunts and valves. Dr. Hernández has published over sixty articles in national and international journals. In 2002 she received a Young Scientist Award from the Third World Academy of Sciences (TWAS). She has been recognized several times by the Cuban Academy of Sciences and the Nuclear Energy Agency of CITMA, and in 2022 she was awarded the Order of Carlos Juan Finlay, the highest prize given by the Cuban government for scientific research. In describing Dr. Hernández’s accomplishments, the Kovalevskiaia Prize Committee noted that she is “one of the greatest specialists in numerical analysis in Cuba and in Latin America.” Interestingly, Dr. Hernández’s mother, María Victoria Mederos Bru, was a pioneer of research in numerical analysis in Cuba.

Lifetime Achievement: Dr. Concepción Valdés Castro is a Professor of Mathematics at the University of Havana. She was the first Cuban woman to obtain her doctorate in mathematics — in 1976 from the renowned math faculty of Moscow State University. She is the author of numerous books and articles on the history of mathematical analysis, as well as several multi-edition textbooks used by university students throughout Latin America. Dr. Valdés has given graduate seminars and short courses in most Spanish-speaking countries of the world. She has received many medals and prizes for her pedagogical activities. Although all Kovalevskiaia Prize winners received warm applause, the ovation for “Concha,” as she is called, was especially long and enthusiastic. All but the youngest generation present had been in her classes at one time or another, and all had learned analysis from her textbooks.

A most unexpected closure to the ceremony was that the Rector awarded the two of us Anniversary Medals of the University of Havana. According to the official announcement, “The 295th Anniversary Medal of the University of Havana has been established by the University Council in order to recognize Cubans and foreigners whose work has a special relevance corresponding to the values that inform the institution... in the intellectual domain, in professional formation, and in political transformation that enhances human development.”