

**CITIZEN DIPLOMACY ACTION FUND**

**SCIENTIFIC CARIBBEAN FOUNDATION**

**SATURDAY RESEARCH ACADEMY PROGRAM**

**Introduction**. The concept of research experiences for high school students was initiated by Dr. Juan F. Arratia, during his tenure as Director and Principal Investigator of the Model Institution for Excellence (MIE), a project funded by the National Science Foundation (NSF) at Universidad Metropolitana (UMET), San Juan, Puerto Rico from 1998 until 2008. After more than twenty years of funding by NSF Dr. Arratia impacted and mentored more than 4,000 high school students from public and private school, across Puerto Rico. The Saturday Research Academy was really successful in producing a pipeline from pre-college-undergraduate to graduate school using research as the tool to motivate thousands of pre-college students in science, technology, engineering, mathematics, and computer science (STEM-C) fields.

**Virtual Saturday Research Academy Program.** The virtual program will be a semester long program, with meetings on Saturdays from 8:00 am to 12:00 pm. Dr. Arratia, and research assistants, with research experience in Puerto Rico and US research institutions will help the participants to explore and implement the steps of the research cycle (state the problem, research information, produce a hypothesis, test the hypothesis, analyze data and draw conclusions) within specific STEM-C projects. During the research process the participants will work in individual research projects, learn search techniques, read scientific papers, as well as how to design abstracts and professional poster or oral presentations. Dr. Arratia and research assistants will be responsible for guiding the students on how to conduct research in an ethical way. Orientation sessions in career in STEM-C fields and critical thinking training will be given to students during the semester long program. All the participants will report to Dr. Juan F. Arratia by e-mail, in English, on a weekly basis, reporting their progress in their weekly meetings and advances in their research projects. The design of a competitive poster must include the following segments: title, abstract, introduction, material/methods, results, references, acknowledgments and further information. A Research Symposium will be held virtually on March 12, 2022, where the participants will present the projects worked during the semester to the high school community. A Symposium Proceeding will be edited by Dr. Leonid Zotov containing all the abstracts of the participants. The Symposium Proceedings will be available at the project webpage.