SIMONS FOUNDATION

BPA - Private Foundations Science Funding

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President
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What is the role of science philanthropy?

- Contrapuntal to Federal funding
  - Should take a high risk approach (e.g., pivot fellowships)
  - Derisk area
  - Fund with different mechanisms (e.g., collaborations)
  - Fund “undervalued” areas (e.g., marine microbial ocean sciences)
  - Ability to cross borders both between fields and countries

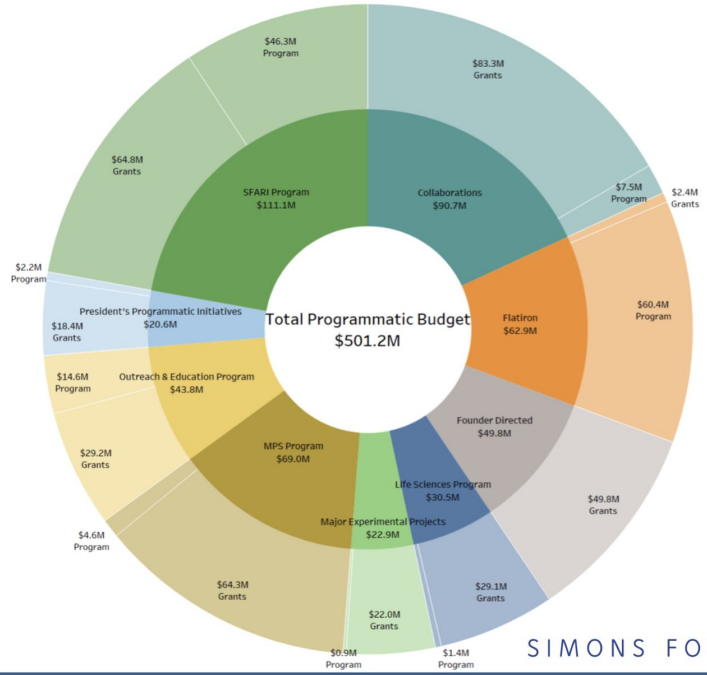
- Complementary to Federal funding
  - Joint funding of centers (e.g., NSF/Simons Research Center for the Mathematics of Complex Biological Systems)

- Rapid Response (e.g., funding of scientists fleeing Russian invasion of Ukraine)

Simons Foundation

- $5B endowment (11% spend rate projected for 2022)
- $312 million in grant payments in 2021 (unaudited) + Support of internal research (Flatiron + Autism)
    - ~$110 million in MPS in 2021 ($60M in research grants + $21M in education+outreach + $30M in Flatiron (CCQ+CCA+CCB))
- 2,750 active grants and gifts in 2021
- 550 institutions funded, domestic and international, in 2021
- We've funded awards in all 50 US states, and Washington D.C.
- We've funded awards in 38 countries

2022 Program Budget Composition



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Theoretical Physics

- **Simons Investigators in Theoretical Physics:** 5 per year for 5+5 years, each at $100K/year
- **Quantum materials and quantum states of matter:** $5M/year for 4+3 years
- **Disordered materials, the Glass problem:** $2M/year 4+3 years
- **Meta-materials and waves:** $4M/year for 4+3 years
- **QFT, String Theory, and Information Science:** $4M/year for 4+3 years
- **Plasma, fusion, turbulence:** $3M/year for 4+3 years
- **Simons Fellows, Simons Junior Fellows**

Theoretical Astrophysics and Cosmology

Simons Investigators in Astrophysics: 2 per year for 5+5 years, each at $100K/year

Cosmology and AI: $2M/year for 4+3 years

Early Universe: $1.5M/year for 4 years

Astrophysics of Modified Gravity: $500K/year for 5 years

Simons Fellows, Simons Junior Fellows

Observational and Experimental Programs

- **Simons Array:** 2012-2014, total budget $29.5M, the SF funding 13M
- **Simons Observatory:** 2016-2024, total budget $109.5M, the SF funding 90M
- **Searching for new particles (axions, dark photons..)** 2019-2023, total funding $1.4M

Biophysics and Physical Chemistry

- **Theoretical Physics for Living Systems:** Simons Investigators, 2 per year, for 5+5 years, each at $100K/year
- **Simons-NSF Math Bio Centers:** 4 centers, total SF funding $4M/year for 5 years
- **Computational Physical Chemistry: $**2M/year for 5+5 years

Commitment to Diversity, Inclusion & Equity

CUNY Master's in Astrophysics

- $4.1M Over 4 Years
- The program is designed to prepare students from all backgrounds to excel in astronomy and physics doctoral programs as well as STEM careers. The cost of graduate education has been a stumbling block for underrepresented minorities and this program alleviates the financial and educational impediments.

AstroCom NYC Program

- Since 2017, we have funded over $400k in grants to support this program.
- AstroCom NYC serves as a model for urban areas with large and diverse minority populations. Their specific objectives are to (1) create an inclusive program to promote student recruitment and retention in astrophysics by supporting students throughout their studies and research with structured mentoring, fellowships, and additional academic preparation for research; (2) improve student retention and graduation in STEM, particularly physics; (3) create an innovative community of diverse, urban astrophysicists in New York City to concentrate and support otherwise dispersed CUNY students and faculty; and (4) build CUNY students' sense of belonging in astrophysics by creating opportunities for them to work within this unique community of research institutions.

AIP Team Up Together Initiative

- $12.5M Over 5 Years
- AIP has launched the TEAM-UP Together program in collaboration with a set of Lead Partners, and the AIP Foundation is undertaking a campaign to raise $30M in support of the 2030 goal of doubling the number of African Americans with Bachelor’s degrees in physics and astronomy.

The National GEM Consortium

- $10.1M Over 5 Years
- The mission of the National GEM Consortium is to increase the number of underrepresented groups (African Americans, American Indians, and Hispanic Americans) at Master’s and Doctoral levels in engineering and science. The collaboration between the Simons and GEM will focus on supporting fellows devoted to math and basic science. This program provides a stipend, tuition assistance, and paid internships for fellows entering a Master’s program or PhD program.

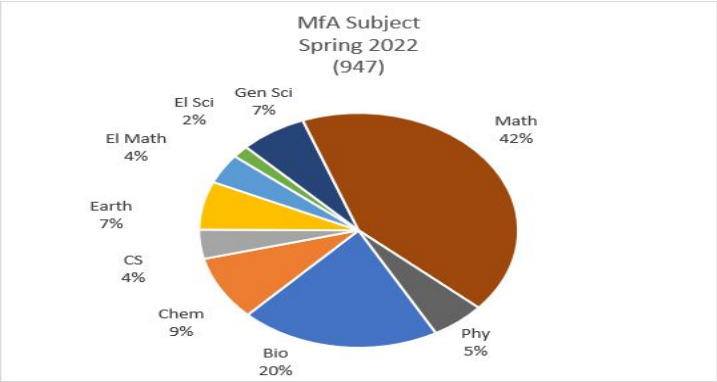
Flatiron Institute

- Budgeted $29.9M in 2022 towards Physics & Astronomy through its Computational Centers in Astrophysics, Biology, & Quantum Physics.
- The mission of the Flatiron Institute is to advance scientific research through computational methods, including data analysis, theory, modeling and simulation. The institute, an internal research division of the Simons Foundation, is a community of scientists who are working to use modern computational tools to advance our understanding of science, both through the analysis of large, rich datasets and through the simulations of physical process.

Math for America

- MfA was founded in 2004 as an organization committed to teachers. We've created four-year fellowships for accomplished public school mathematics and science teachers who make a lasting impact in their schools, their communities, and the profession at large.
- MfA teachers participate in and lead professional growth and enrichment opportunities throughout the year, ranging in focus from mathematics and science content to pedagogical practice and leadership.
- There are over 1,000 MfA teachers across our fellowships. Over the past five years, the Simons Foundation has provided more than $100M to support this program.

- 52 of 947 Master's level Teachers at MfA teach Physics & Astronomy which represents $1.4M of the budget.
- 20% of NYC Licensed Physics Teachers are a part of MfA.



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Quanta Magazine

- $1M of Quanta's budget is devoted to developments in Physics
- Quanta Magazine is an editorially independent online publication launched by the Simons Foundation to enhance public understanding of science.
- Our reporters focus on developments in mathematics, theoretical physics, theoretical computer science and the basic life sciences.
- Since Quanta is a nonprofit foundation-funded publication, all of its resources go toward producing responsible, freely accessible journalism that is meticulously researched, reported, edited, copy-edited and fact-checked.

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