

SIMONS FOUNDATION

Simons Investigators in the Mathematical Modeling of Living Systems

Request for Nominations

The Simons Foundation invites nominations for Simons Investigators in the Mathematical Modeling of Living Systems (MMLS), a joint program of the Mathematics and Physical Sciences and Life Sciences divisions of the Simons Foundation. Investigators in MMLS are outstanding scientists, often with mathematics or theoretical physics backgrounds, now engaged in research based on mathematical modeling in the life sciences.

Rationale and scope: New approaches in mathematically based modeling are making increasingly important contributions to the life sciences. The MMLS program aims to support such approaches and foster a scientific culture of theory-experiment collaboration similar to that prevailing in the physical sciences. To encourage young researchers to pursue this endeavor, the MMLS program will provide a long-term, stable base of support, enabling a focus on model-based approaches to important issues in the life sciences.

A broad spectrum of research areas within the life sciences will be considered, ranging from cellular-level issues of organization, regulation, signaling, and morphogenic dynamics to the properties of organisms and ecology, as well as neuroscience and evolution; however, preference will be given to areas in which modeling approaches are less established and, for this reason, bioinformatics- and genomics-related proposals fall outside the scope of the program. In all cases, preference will be given to work that relates closely to experiment, developing mathematical models that can explain data, suggest new classes of experiments and introduce important new concepts.

Basis for Awards: The intent of the program is to help launch the research careers of outstanding junior scientists. Nominees to the program will normally be in the first few years of their first faculty appointment. Nominations will be evaluated on the basis of nominees' potential for scientific accomplishment.

Level and Duration of Funding: A Simons Investigator in MMLS is appointed for a period of five years. Appointments will begin August 1, 2017.

An Investigator will receive research support in the amount of \$100,000 per year. An additional \$10,000 per year will be provided to the Investigator's department. The award will be administered through the Investigator's institution, which will receive an additional 20 percent per year in indirect costs.

An Investigator position may be interrupted and resumed for reasons that would normally justify a leave from a university, such as illness, the need to care for family members or time off for national service. Periods of sabbatical or research leave do not count as interrupting the Investigator position. Support may be withdrawn at any time at the discretion of the foundation, but it is expected that termination of the award at times other than five years would occur only rarely.

Allowable Expenses: The funding provided to a Simons Investigator may be used at the Investigator's discretion to support research expenses in the following categories:

- Up to one month of summer salary and related benefits per year for the Investigator.
- Salary support and related benefits, including tuition support, for postdoctoral, graduate or undergraduate research assistants.
- Domestic or international travel for the Investigator and the Investigator's postdoctoral and graduate students.
- Short- or long-term visitors and/or collaborators, including travel, meals and lodging expenses
- Research equipment, supplies and other expenses directly benefiting the research, including computers, computer support, publication expenses and professional membership dues.

Expenditures in other expense categories may be possible but must be approved in advance by the foundation. Investigator funds may not be used for sabbatical salary support or teaching relief of any kind.

Funding provided for the Investigator's department should be used at the discretion of the department chair to provide support for seminars, visitors, refreshments and related expenditures that benefit the research activities of the department. Funds may also be used to subsidize meals for faculty, students and visitors. In addition, these funds may be used to help pay for furniture and research infrastructure such as copiers, computer servers and computer support. The department is expected to provide appropriate administrative support to the Investigator.

Unspent Funds: The foundation's intent is that the award be administered to allow the maximum flexibility in pursuit of scientific goals. To this end, with the exception of salary and fringe benefits for the Investigator, unspent funds are automatically carried over from year to year during the period of appointment, allowing for a particularly large expenditure in one year. In exceptional circumstances, it may be appropriate to pre-spend a portion of the award.

Requests for accelerated disbursement will be considered by the foundation, subject to budget availability and joint approval by the directors of the Mathematics and Physical Sciences and Life Sciences divisions. Investigators may apply for a no-cost extension for funds unexpended at the conclusion of the appointment.

Reporting: Tentative five-year spending plans will be due from the Investigator by **December 1, 2017**.

A financial report and a brief activity report, summarizing research results achieved, people supported, talks given and papers published, will be required from the Investigator annually, due by September 30 of each year.

Eligibility: To be an Simons Investigator in MMLS, a scientist must be engaged in research related to the program and must not previously have been a Simons Investigator. He/she must have a primary appointment as a faculty member at an educational institution in the United States, Canada, or United Kingdom, on a campus within these countries, and the primary department affiliation must have a Ph.D. program. At the time of appointment, an Investigator should be in the early stages of an academic career (within eight years of the start of his/her first faculty position) and, typically, be holding an assistant professorship or equivalent position.

The foundation reserves the right to determine eligibility, but, generally, a “primary appointment” is defined as one where the Investigator is a full-time employee of an academic institution with a teaching load that is comparable to that of other faculty members in the same department. Investigators may transfer their awards to new educational institutions within the United States, Canada or United Kingdom, subject to approval from the foundation and the old and new institutions. The award will be interrupted or terminated, at the foundation’s discretion, if an Investigator takes up a primary long-term position at (i) a research institute, national laboratory or other institution outside the United States, Canada or United Kingdom, or another campus of their current institution, which falls outside the United States, Canada or United Kingdom (ii) a for-profit organization or (iii) accepts a major administrative responsibility that significantly reduces the time available for research.

Investigators are not eligible to hold a Simons Fellowship for the duration of the Investigator award.

Investigators are expected to attend annual meetings, held at the Simons Foundation each fall, to discuss their activities. Costs associated with attending this meeting will be covered by the foundation.

Number of Awards: In 2017, the foundation expects to appoint eight Simons Investigators in MMLS.

Nomination Procedure: The foundation asks each university to submit a maximum of two nominations to the MMLS Investigator program. Nominees must be submitted through an online process via proposalCENTRAL (pC) (<https://proposalcentral.altum.com/default.asp>). The deadline to submit nomination applications is **October 31, 2016, at 11:59:59 p.m. EST**.

Nomination applications must be submitted by an institutional representative via his/her pC account in coordination with the appropriate institutional officials and policies. **Please refer to the attached “Simons Investigators Nomination Instructions for MMLS 2017” for further information on and requirements for submitting the nominee’s nomination material.**

Required Nomination Materials include:

- Nomination letter (two-page limit) written and signed by the nominator (a relevant university official; for example, a department chair or dean), explaining the distinctive scientific contributions of the nominee and including discussion of a few important papers.
- Letters of support from two senior scientists (two-page limit for each). The letter writers can be the nominee’s Ph.D. and postdoc advisors or can be other scientists familiar with the nominee’s recent work and research goals. The letters should be signed and indicate the nominee’s most significant research accomplishments and provide insight into the nominee’s research program and likely future scientific trajectory.
- The nominee’s curriculum vitae, including email address, Ph.D. year, institution, advisor, postdoctoral institutions and advisors, positions held subsequent to award of doctorate and the nominee’s up-to-date publication list.
- A list of postdoctoral fellows and Ph.D. students supervised by or currently under the supervision of the nominee.
- A research statement prepared by the nominee that outlines the nominee's research vision and plans. (Two-page limit; references and figures do not need to be included in the page limit but should not exceed an additional page.)
- 501(c)(3) equivalency determination letter from the IRS for international institutions, if available.

Please note: nominations submitted via email or by the nominee will not be considered.

The foundation expects to notify nominees of the decision by May 31, 2017.

Important Dates:

Nomination Deadline	Notification	Award Start Date
October 28, 2016	May 31, 2017	August 1, 2017

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