James S. McDonnell Foundation

Understanding Dynamic and Multi-scale Systems

2018 - 21st Century Postdoctoral Fellowship Awards

Overview of the Program

The Understanding Dynamic and Multi-scale Systems program supports scholarship and research directed toward the development of theoretical and mathematical tools contributing to the science of complex, adaptive, nonlinear systems. While the program's emphasis is on the development and application of the theory and tools used in the study of complex research questions and not on particular fields of research per se, JSMF is particularly interested in the continued development of complex systems science, and in projects attempting to apply complex systems approaches to coherently articulated questions.

The Fellowship

NOTE: To receive up-to-date notifications regarding the 2018 Postdoctoral Fellowship Award guidelines, you may sign up to our notification mailing list: http://eepurl.com/dpHtf-/

Students completing doctoral training, desiring to continue gaining experience in a multi-disciplinary field such as complex systems science, benefit from postdoctoral training providing an opportunity to broaden research experience and acquire additional skills prior to pursuing a career in academia or elsewhere.   Success in securing a postdoctoral position, particularly those providing training that adds new dimensions to a student's doctoral education (adding theoretical skills to one's experimental training or vice versa; pursuing work in a new topic or field), oftentimes depends on the availability of funds to support positions via institutional training grants or faculty research grants.   The latter case can result in a postdoctoral fellow engaging a research project dictated by the needs of the research grant rather than pursuing a self-directed training program based on his or her interests or goals.

The James S. McDonnell Foundation 21st Century Postdoctoral Fellowship Award in Understanding Dynamic and Multi-scale Systems provides fellowships to students completing doctoral training in the multidisciplinary field of complex systems science. The JSMF Fellowship is intended to provide students in the final stages of completing a Ph.D. degree more freedom in identifying and securing postdoctoral training opportunities in complex systems research. The program, following review of applications, provides selected pre-doctoral students with "letters of intent to fund" that the student can use in negotiating with potential postdoctoral training institutions while the student is in the final phase of graduate school.   **The JSMF Fellowship is designed to provide students with an opportunity to seek potential postdoctoral**

research opportunities on the basis of the student's interest and desire to obtain additional skills and experience that will further their pursuit of careers in complex systems science.

Award Details

The total amount of the JSMF Fellowship is $200,000 USD to be expended in no less than 2 and no more than 3 years.

o   The cost of the full postdoctoral salary or stipend and fringe benefits must be paid in full from the fellowship.
o   Institutions cannot request that other funding sources be used to cover the Fellow's salary or stipend; the primary purpose of this fellowship is the continued education and training of the postdoctoral fellow. The fellowship is not intended to provide general support to a laboratory or department.
o   If the institutional postdoctoral salary scales are set such that there are funds in excess of what is needed for stipend and benefits, the excess funds can be used by the institution to support the Fellow's research.

Important Note: JSMF Fellowships are not awarded until the student applies to and is accepted as a postdoctoral fellow at a qualified institution **and** the institution submits an acceptable application to JSMF.

Eligibility

The JSMF Fellowship is a unique opportunity for students with complexity science training who are in the final stages of completing their Ph.D. looking to make a significant change in direction for their first postdoctoral fellowship (field of study, model organism, theory vs experimental, etc.) that will either be difficult or impossible without an external source of funding.   Students should anticipate activating the fellowship between June 2019 and February 28, 2020.

In prior years, upwards of 70% of submissions are not advanced past the first review phase due to poor fit with this goal of the program.

Important Note: It is not intended for individuals that already have a Ph.D. or students that have already identified a postdoctoral position and a postdoctoral mentor as there are traditional funding mechanisms available for these students.

For more detailed eligibility information, complete the [eligibility quiz](#).

Deadline

Applications and letters of support can be submitted beginning May 1, 2018. The deadline for applications and letters of support is **June 15, 2018, 15:59 CDT (20:59 UTC)**. All materials must be submitted electronically through the specified process.

Decisions and Notification

Applications that meet the eligibility requirements will be reviewed by an [expert advisory panel](#). The panel will use the quality and appropriateness of the proposed fellowship plan, academic productivity, and letters of support as the basis for recommending applications for funding consideration.

Final funding decisions will be announced at the end of October after the JSMF Board of Directors meets and considers the advisory board's recommendations.

It is planned that JSMF could support up to 10 Fellowships, possibly more, each year.

Applying for the Letter of Intent to Fund Phase

It should be clear from the application that the reason for pursuing a post-doctoral position is qualitatively adding to the student's training by pursuing a postdoctoral position. Ideally, the fellowship will allow the applicant to broaden their skills, knowledge, and scientific contacts.   Complete applications must be uploaded to the JSMF website. Submissions for the letter of intent to fund phase must contain the two parts below to be considered complete:

Part 1: To be submitted as a single PDF file by the applicant:

Applications will be accepted beginning May 1, 2018, up until the deadline of June 15, 2018, 15:59 Central Time (20:59 UTC). Late applications will not be reviewed. We recommend submitting applications at least 24 hours before the deadline to allow for unforeseen circumstances.

Use this link to submit an application: https://www.jsmf.org/postdoc

A complete applicant application consists of the below items in order in a single PDF. Word counts, where specified, should be included at the top of the section.

1. A JSMF Coversheet (use this template: .docx .rtf (or create your own with the same required information)
2. Summary page (500 word maximum)
   o The JSMF Fellowship is intended to support students with the opportunity to broaden research experience and acquire additional skills prior to pursuing a career in academia or elsewhere. If awarded this fellowship, explain how the fellowship would significantly change the direction (field of study, model organism, theory vs experimental, etc.) of the student's future research more so that a typical postdoc position and how he or she would broaden their complex systems training.

- Provide a list of the top 2 contributions (articles, code, software, etc.) made by the student during the Ph.D. period.
3. A brief description of the student's <u>current research</u> written in essay format (500 word maximum)
4. A description of the student's <u>future research</u> interests written in essay format (2000 word maximum)
    - Include how the student's future plans fit this specific program.
    - Explain how the student's research principles are connected to the field of complex systems.
5. A description of the postdoctoral position the student will seek to obtain and what he or she intends to achieve during postdoctoral training. (1000 words maximum)
    - Provide specific details about what the student intends to achieve during postdoctoral training.
    - Evidence of thoughtful decision-making concerning the expectations and goals of further research training will be an important selection factor.
    - Why is this fellowship, compared to a traditional fellowship, the best fit for your postdoctoral training plans?
    - Finally, what is the student's plan after the fellowship? Does the student plan to seek another fellowship, obtain employment in industry or government, pursue a faculty career in academia, or start a business? Note: All of these options are equally acceptable responses.
6. JSMF is committed to open science and best practices for transparency and reproducibility. In a brief paragraph, explain how the student is supporting open science.
7. The student's curriculum vita (2 page maximum)

To submit an application the following additional information must be entered into the online form:

- The information contained on the coversheet
- Up to 4 key words that categorize the proposed fellowship research
- A list of the people that have reviewed the application prior to submission to JSMF.
- Summary information (**Important:** These abbreviated summary sections (250 words each) are important and may be used as part of the review process.)
    - Current/past research (250 word maximum)
        - Brief summary of your doctoral research program
    - Future research (250 words)
        - Brief plan for the research directions you will pursue with this fellowship.
- The name, institution, and email address of the Ph.D. mentor that will be providing letter #1 of support
- The name, institution, and email address of the person that will be providing letter #2 of support
- File upload: Select and upload a PDF version of the application containing all the required information.

Upon submission a confirmation email will be sent to the student indicating the application was received.

Part 2: To be submitted separately as single PDF files by the Ph.D. mentor and other faculty member:

Students must request two letters of support to be submitted that address the student's qualifications and benefits anticipated to be gained during a period of postdoctoral training. Letters of support **should not** be included in the application file. Letters must be submitted directly by the letter writer.

Letters of support will be accepted beginning May 1, 2018, up until the deadline of June 15, 2018, 15:59 Central Time (20:59 UTC). Late letters of support will not be included with the applicant's application. We recommend submitting letters of support at least 24 hours before the deadline to allow for unforeseen circumstances.

Use this link to submit a letter of support: https://www.jsmf.org/letter

Letter submitters will be required to enter into the form:

- His or her name, institution, and institutional email address
- The applicant's name and email address
- File upload: Select and upload a 2 page maximum PDF version of the letter of support.

Upon a successful letter submission, both the individual submitting the letter of support and the applicant will be emailed a confirmation receipt.

Advice to Share with the Letter Writers

Letters of support are considered an important part of the JSMF Fellowship application and are used as key information in the review process. Letter writers should use the text to describe the student's skills, abilities, achievements, and provide information that the advisory panel can use to evaluate the applicant's fit with the opportunity afforded with the JSMF Fellowship.

- LETTER 1: Letter of support from Ph.D. mentor
    1. Must provide assurance that the student will complete all Ph.D. degree requirements and be able to start a postdoctoral position between June 2019 and February 28, 2020.
    2. Should state whether he or she **reviewed and provided feedback** on the student's application prior to submission to JSMF.
    3. Tell us about what you see as the top 2 contributions (articles, code, software, etc.) made by the student during the Ph.D. period and why it is important.
    4. Areas to consider including in the letter:
        - Academic qualifications
        - Perceived fit with the JSMF Fellowship (maturity and independence)
        - Technical skills
        - Inquisitive nature
        - Collaboration
        - Creativity

- ☐ LETTER 2: Letter of support from a faculty member familiar with, but not directly involved in supervising, the student and the student's research.
  - Should address the student's qualifications and the benefits anticipated to be gained during a period of postdoctoral training.

Requirements for both letters of support:

- o Letters must be on institutional letterhead (if available) and in PDF format
- o No more than two (2) pages in length. Letters exceeding this length will be truncated without acknowledgement.
- o Letters of support that are emailed, faxed, or sent by physical mail will not be processed.
- o Letters of support can be submitted anytime, independent from the applicant's submission (Part 1), starting May 1, 2018, until the application deadline of June 15, 2018, 15:59 Central Time (20:59 UTC).

Frequently Asked Questions

Am I eligible to apply for a JSMF fellowship award?

Students should not already have a Ph.D. but be on track to complete all degree requirements and be ready to start their first postdoctoral fellowship between June 2019 and February 28, 2020. There are no geographic restrictions for applicants. For more information, take the [Eligibility Quiz](#).

I have a question about font, margin, page requirements, references, image captions, etc.

There are no specific guidelines related to these types of questions. Use your best judgment, and understand that the application file submitted should be easily readable. References and image captions are not included in word counts, within reason.

I've decided the institution I want to go to for my postdoc position. How can I explain this in the application?

If you've already made a decision on where you are going for a postdoc then you are not eligible to apply for this fellowship. This fellowship is not intended for individuals that already have a Ph.D. or students that have already identified a postdoctoral position and a postdoctoral mentor as there are traditional funding mechanisms available for these students.

I have more than one Ph.D. mentor. Should I have each mentor submit a letter of support?

No. Only one Ph.D. mentor letter of support should be submitted for your application file. If you have more than 1 mentor please ask them to write a joint letter that is up to 2 pages in length. Letters exceeding 2 pages will be truncated without acknowledgement.

I have more than one letter for the non-mentor letter of support. Should I have each letter writer upload a letter?

No. Only one non-mentor letter (up to 2 pages in length) should be submitted for your application file. Letters exceeding 2 pages will be truncated without acknowledgement.

Will you accept a late application or letter of reference?

No. All materials must be received on or before the official deadline. Late applications and letters of reference will not be reviewed. It is up to the applicant to verify with the letter writers that letters of support are submitted prior to the deadline.

If I apply and receive a letter of intent to fund, when can I activate the award?

We anticipate that letters of intent awarded in 2018 may be activated between June 2019 and February 28, 2020.

For various reasons, should I receive a letter of intent to fund I would like to stay at my doctoral institution for a postdoctoral position. Is that acceptable?

The intent of this program is to allow students to broaden their training and experience. If a letter of intent to fund is received, it is unlikely that an application to remain at the same institution as the doctoral work will be approved.

I'm considering applying for the JSMF Fellowship, but if I receive a letter of intent to fund I am unable to commit to activating it.

Applying to the JSMF Fellowship is highly competitive. By applying for a letter of intent to fund, the student indicates his or her strong intention to activate the award, if received. Students should contact us info@jsmf.org and withdraw their application from further review if at any time this is no longer true.

What institutions can be used for a JSMF Postdoctoral Fellowship Award?

Please note that due to changes in U.S. Treasury regulations, the Foundation no longer maintains a list of grantee institutions on file.

If awarded a letter of intent to fund, applicants must select a postdoctoral position at a qualified institution. Any U.S. or foreign institution with IRS 501(c)(3) tax-exemption status qualifies. Domestic or foreign institutions that are instruments of the government (supported financially by the state or national government) also qualify. In all cases, potential grantee institutions require supporting documentation of the institution's tax status.

I applied to this program in a prior year. Am I eligible to apply again this year?

No. Once you have applied to the JSMF Postdoctoral Fellowship program you are not eligible to apply again in future years.

I haven't received an email confirmation for submitting an application or a letter of support that I know was submitted.

Check your spam folder to see if the confirmation email was mistakenly classified as spam. Verify that the email address entered on the form was not entered incorrectly. The confirmation code provided on the submission page serves as the verification that a submission was successfully received.

I made a mistake with my submission, and the submission deadline has not passed. How do I correct the error?

If the mistake is significant (e.g., you left out pages of your application) then you should go through the application submission process again. If there are duplicate submissions only the most recent is used.

I'm having a problem with an electronic application or a particular program guideline. Whom can I contact for help?

For the fastest response, send an email to info@jsmf.org.

Advisory Panel

Luís A. N. Amaral, Northwestern University, Evanston, Illinois, United States

Leticia Avilés, University of British Columbia, Vancouver, British Columbia, Canada

Gang Bao, Rice University, Houston, Texas, United States

Jean Carlson, University of California - Santa Barbara, Santa Barbara, California, United States

Madalena Damásio Costa, Beth Israel Deaconess Medical Center, Boston, Massachusetts, United States

Iain Couzin, Max Planck Institute, Konstanz, Germany

Jonathan Dushoff, McMaster University, Hamilton, Ontario, Canada

Wayne Getz, University of California –- Berkeley, Berkeley, California, United States

Ramanan Laxminarayan, Center for Disease Dynamics, Economics & Policy, Washington, DC, United States

Lauren A. Meyers, University of Texas at Austin, Austin, Texas, United States

Melanie Mitchell, Portland State University, Portland, Oregon, United States

Mercedes Pascual, University of Chicago, Chicago, Illinois, United States

Van Savage, University of California – Los Angeles, Los Angeles, California, United States

Important Dates

March 23, 2018
Application guidelines posted on the website

May 1
Applications and letters of support can be submitted via the website beginning this date

June 15, 2018 15:59 CDT (20:59 UTC)

Last updated: 2018-05-03

Deadline to submit an application and letters of support

June 16 - September

Applications will be reviewed during this time

September 14

Advisory panel will meet to discuss the finalists

September 18

Notification of decisions will be sent by email on or before this date. If you do not receive notification on this date first check your spam filter and then contact info@jsmf.org.

Late October

JSMF Board of Directors will consider the advisory panel's recommendations

June 2019

Earliest anticipated activation date for a fellowship awarded in 2018

February 28, 2020

Latest anticipated activate date for a fellowship awarded in 2018

--End--

Last updated: 2018-05-03