**Bates College NSF-MRI White Paper Competition, 2017 Submission**

NSF’s Major Research Instrumentation (MRI) program limits institutions to three applications per year, of which no more than two may be Acquisition proposals. The following information will be used to aid the Dean of the Faculty’s office in selecting which PIs / groups of PIs should move forward with preparing full applications for submission to NSF. For any questions regarding terminology, please refer to the full Program Solicitation at <http://www.nsf.gov/pubs/2015/nsf15504/nsf15504.pdf>.

PI (name, department, title):

Co-PIs (up to 4; name, department, title, and if any are not affiliated with Bates, institution):

Any other major users for research purposes:

Select one: Acquisition or Development (see definitions in section II.a. of Program solicitation, pages 6-7)

As defined by NSF, “A well-integrated research instrument means that the ensemble of equipment that defines the instrument enables a specific research experiment or type of research experiment to be undertaken; separating or removing an element or component of such an integrated instrument would preclude any experiments from occurring or succeeding. The MRI program does not support the acquisition or development of a suite of instruments to outfit research laboratories/facilities or to conduct independent experiments simultaneously. Similarly the MRI program does not fund common, general purpose ancillary equipment that would normally be found in a laboratory and/or is relatively easily procured by the institution.”

Please briefly describe the research instrument you propose to acquire or develop (no more than 100 words):

Does this instrument replace an existing instrument at Bates? (Yes or No):

If Yes, please briefly list the research projects and courses, if any, in which the existing instrument is presently used:

Where would the new instrument be housed?

Current best estimate of total cost of the new instrument (attach quotes if available):

Does this estimate include a maintenance/service plan? Please list estimated annual maintenance costs, and describe any plans for possible means of defraying such costs:

Based on the manufacturer’s specifications for size, electrical load, ventilation, hazardous materials, climate control, network connectivity, etc., would any changes need to be made to the proposed space for proper installation of the instrument? Please describe to the best of your ability.

Is any personal protective equipment needed for safe operation of the proposed instrument? Please describe.

Please describe, to the best of your ability, any radiation safety calibration or licensing requirements for the proposed instrument.

To the best of your knowledge, what is the location of the geographically closest, comparable instrument?

Attachments:

1. Intellectual Merit: Each proposed PI/Co-PI/Senior Research User must be a participant in at least one research project that would be enabled by the proposed instrument. Please attach brief descriptions, not exceeding one page each, of each such project (with the total length of such descriptions not to exceed 5 pages, single-spaced).
2. Broader Impacts: Please describe, in one single-spaced page, the broader impacts that your proposed instrument will have.
3. For Development proposals only: Please describe, in one single-spaced page, how your proposed instrument differs from current, commercially available research instruments.

Completed white papers, including the above attachments and any quotes, must be submitted via e-mail to [**jtomaras@bates.edu**](mailto:jtomaras@bates.edu) no later than **4:30 p.m. on Monday, October 24th**.