Cover Section *(1 page by itself)*

**MRI Type**: *Acquisition or Development*

**Title**: *Insert Brief Title*

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| --- | --- | --- | --- |
| **Name** | **Proposal Role[[1]](#footnote-1)** | **Institution/Department** | **Project Role or Activities** |
| Doe, Jane | PI | UM; Dept. of Electrical Engineering | *list activities involved and role on those* |
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**Project Summary** *(1 page by itself, including Overview, Intellectual Merit, and Broader Impacts)*

**Overview Statement**:   
*(per instructions in the solicitation and the NSF Grant Proposal Development Guide. Describe the activity that would result if the project is funded, including objectives and methods. Who/what/where/how?)*

Enter your text here….

**Intellectual Merit Statement:**

*(per instructions in the solicitation and the NSF Grant Proposal Development Guide What is the instrument’s potential to (enable research that will) advance scientific knowledge? Focus on the science that the instrument will make possible.)*

Enter your text here….

**Broader Impacts Statement:**

*(per instructions in the solicitation and the NSF Grant Proposal Development Guide. What is the potential of the instrument’s acquisition, development, and lifespan to benefit society of advance societal outcomes? How will the instrument create a substantial improvement in the organization’s ability to conduct leading-edge research, provide research experiences of graduate/undergraduate research using leading-edge capabilities, and broaden participation in STEM by underrepresented groups? Extent of anticipated shared use?)*

Enter your text here….

**Project Description**   
*(5-7 pages).*

**a) Information about the Proposal**

**a1) Instrument Location and Type**

Your text here….

**a2) Justification for submission as Development (Track 2) proposal.***(only required for Development proposals; not needed for acquisition proposals.*

*How will the end result of the effort be a stable shared-use instrument, rather than technology development, a device, a product or a technique? What significant new capabilities, not available from an instrument provided by a vendor, will the new instrument provide? Does the instrument development effort build capacity for such activities in an MRI submission-eligible organization(s)? In what way does the instrument development require design work that must be undertaken or has been undertaken in-house, rather than through published designs in the literature? Does the instrument development require/benefit from a team of scientists/engineers/technicians that bring a variety of skills to the project? For what activities does the instrument development require a significant number of person-hours, more so than simple "assembly" of purchased parts? Does the instrument development require timeframes for completion that are longer than are required for plug-and-play or assembled instruments? Does the instrument development require the use of a machine shop or a testbed to fabricate/test unique components? Does the development effort have potential risks in achieving the required specifications, and hence requires a risk mitigation plan?)*

Your text here….

**b. Research Activities to be Enabled**

*(Degree to which planned research is exciting, ground-breaking, or transformative; describe the personnel by research area, number, and type (e.g., senior personnel, postdoctoral fellows, graduate students, undergraduate students). Include only those who will most actively use the instrumentation for research and research training on a regular basis. Development proposals should identify specific users who intend to use the specific uses to which they will put it.)*

Your text here….

**c. Description of the Research Instrument Needs**

*(Provide a brief description of the requested instrumentation, including manufacturer and model number where appropriate; include description of related instrumentation currently available at or near UM. For development of new instrumentation, briefly present the design concept, rationale, and development methods. For development proposals, the rationale for the new instrument, the design concept, and the development strategy and methods in sufficient detail to allow for the evaluation of its technical feasibility. Reviewers must be able to evaluate the expected capabilities of the instrument upon completion, and its likely availability for shared use at the end of the award period. Provide appropriate preliminary results from existing equipment, or appropriate calculations and/or models to indicate the added utility or enhanced performance (e.g., reliability, sensitivity, capacity, stability, resolution, or signal-to-noise ratio) to be achieved by the new instrument. Justify the necessity and adequacy of the new instrumentation for the proposed research projects, with reference to instruments that are currently available.)*

Your text here….

**d. Impact on Research and Training Infrastructure**

*(Describe how the instrument will serve to attract researchers and make a substantial improvement in the institution's capabilities to conduct leading-edge research. If appropriate, describe how the instrument will improve the quality of research training. Any proposal requesting direct student support in maintenance or development efforts must justify that involvement in terms of both project needs and the training of the next generation of instrumentalists (reviewers will be asked to evaluate the appropriateness of this type of involvement). Proposals should also address whether and, if so, how the instrument will broaden the participation in science and engineering research by women, underrepresented minorities (African Americans, Hispanics, Native Americans, Alaska Natives, and Native Hawaiians), and persons with disabilities.*

Your text here…..

**e. Management Plan**   
*(For all proposals: Description of space/facility where instrument will be housed. Who will operate and maintain the instrument over its lifetime, and how? What will the technical expertise needed and cost for maintaining the instrument? is that expertise currently in place? If not, how will it be obtained? What procedures for allocating instrument time, and for attracting and supporting new users? What will be the anticipated usage time and downtime of the instrument over its anticipated lifespan?   
  
For development proposals: info about the management of the design, construction, and commissioning phases, including required personnel and anticipated costs of each phase. Assessment of risks. Plans for making the instrument readily available for other researchers. See solicitation.*

Your text here….

**Budget, Justification, and Funding**

*(1 page or less. ESTIMATE and briefly justify the anticipated project costs. Briefly address source(s) of required cost-share--30% of the total project cost, which is about 43% of the amount requested from NSF. Show how budget items are justifiable and eligible costs. Show that at least 70% of the Total Project Cost budget can be included under the Equipment Category. Show the portion of the budget that will be allocated for cost sharing and how that will work. ).*

Your text here….

**Results from Previous NSF MRI Submission**  
*(1 page or less. If this is a resubmission of a previous MRI proposal submitted to NSF, summarize scores and reviewers comments received, and describe how you are addressing those comments in this proposal to improve competitiveness.)*

Your text here….

1. Proposal Roles: PI (one); Co-PI (up to four); Senior Personnel (unlimited); Student; Post-Doc; Other [↑](#footnote-ref-1)