



This file should be submitted as a PDF document via email to Antonios Michalos (michalos@illinois.edu) and Seth Stutzman (seth.t.stutzman@jumpsimulation.org) with the subject line, "Jump ARCHES [Last Name of PI]".

PRIMARY INVESTIGATOR:

Example: *"Antonios Michalos, M.D., M.S., University of Illinois at Urbana-Champaign, The Grainger College of Engineering, Health Care Engineering Systems Center. 217-244-4563. michalos@illinois.edu."*

Name & Title (ex. Professor, M.D., Ph.D., etc):

Overarching Institution (OSF HealthCare, University of Illinois at Urbana-Champaign, or UICOMP):

College or Department (ex. The Grainger College of Engineering, Pediatrics, etc.):

Unit if applicable (ex. Cancer Center at Illinois, Department of Computer Science, etc.):

Phone Number:

Email:

NON LEAD PIs (LIST ALL):

Proposals must identify two co-investigators: one from The Grainger College of Engineering at the University of Illinois at Urbana-Champaign and one from among the clinicians at OSF HealthCare or University of Illinois College of Medicine at Peoria.

Name & Title (ex. Professor, M.D., Ph.D., etc):

Overarching Institution (OSF HealthCare, University of Illinois at Urbana-Champaign, or UICOMP):

College or Department (ex. The Grainger College of Engineering, Pediatrics, etc.):

Unit if applicable (ex. Cancer Center at Illinois, Department of Computer Science, etc.):

Phone Number:

Email:

TITLE OF PROJECT:

SECTIONS:

A. Executive Summary – Please limit to 1 page.

State the application's broad, long-term objectives, specific aims, and how the project contributes to the Jump ARCHES goal and focus area(s). Provide a succinct and accurate description of the proposed work. It should be informative to other persons working in the same or related fields and understandable to a scientifically literate reader. Do not list past accomplishments or use first person.

B. Research Plan – Please limit to 6 pages total.

- **Specific Aims:** list specific aims of proposed project as actions to be taken. Bulleted list is acceptable. If sequential, place in sequential order. If non-sequential, place in order of priority.
- **Research Strategy (See Appendix I below):**
 - **Relevance/Significance:** Does this project address an important problem? If aims are achieved, how will scientific knowledge, clinical practice, or society be advanced? What will be the effect of these studies on the concepts, methods, technologies, treatments, or services in this field? Briefly address the societal impact of your research.
 - **Impact/Innovation:** Is the project original and innovative? Does it challenge existing paradigms or practices, or address an innovative hypothesis or barrier to progress? Does it employ or develop novel concepts, approaches, or technologies?
 - **Approach:** Are the conceptual or clinical frameworks, designs, methods, and analyses adequately developed, well-integrated, well-reasoned, and appropriate to the aims of the project? Does the applicant acknowledge potential problem areas and consider alternative tactics?

C. Special Funding Area*: For proposals requesting consideration under *social and behavioral sciences, neurological sciences, or autism* (see RFP for more information about these topics), briefly address how your proposal impacts this areas. For proposals with a short duration of six months or less, please specify. Without this section, your proposal will be reviewed as a regular ARCHES proposal.

D. Facilities Required* (If you require facilities not available in your laboratory or institution please contact us - e.g, use of a simulation center, simulation equipment, 3D printers or VR/AR laboratories).

E. Bibliography*

F. Budget and Budget Justification* - Please download the spreadsheet [here](#).

G. Biosketches of Lead Investigators* – Please use NIH/NSF style. View instructions [here](#).

H. Data Management and Request Plan* - Please fill out the form [here](#) about data usage and needs in your project. Proposal will undergo additional review by the data committee for compliance and access of data.

Note: No overhead and no tuition remission allowed.

*** Not included in 6-page Research Plan.**

Appendix I

Research Strategy – Approach: Recommended Content & Format

- I. Introduction/Background Information: State what is currently known in the specific field to ground the reviewer in the subject of your research. Provide the necessary details to understand why you are proposing the work.
- II. Problem: Clearly state the gap in knowledge that needs to be addressed. Convey that your project will fill this gap using the funding that you are requesting.
- III. Critical Need: Emphasize the significance of the problem you are trying to address and the reason your proposal should be funded. Make it clear that your research proposes the next logical step to advance the field.
- IV. Introduce solution(s): Clearly state the solution that fills the gap in knowledge. Convince your reviewers that your solution addresses the knowledge gap and that your team has the expertise to accomplish this solution. Address specific aims in both the short and long term (as applicable).
- V. Hypothesis and Proposal Objectives: Your proposal should contain both of these components, depending on the goal. Clearly state your central hypothesis. You want to demonstrate to the reviewers that you have a hypothesis-driven proposal that is testable. Avoid vague hypotheses because it will be unclear to the reviewers what you expect to determine with the proposed research.
- VI. Rationale: Explain how you arrived at your central hypothesis (such as using past studies and published literature). Briefly state what your project's completion would make possible (e.g., new simulators), and tie it to the funding entity's mission and focus area(s).
- VII. Qualifications: Briefly state why your experimental design and your team are the best to accomplish the project goals. Mention factors such as your preliminary data, personnel qualifications, or laboratory equipment.

- VIII. Innovation: State what is innovative about your project. What would completion of this proposal bring to the field that is not present currently?
- IX. Expected Outcomes: What do you expect to see at the completion of each specific aim? Include this information only if you have not placed it in the Aims section. You may either embed or attach supplemental imaging or other diagrams to support your statements.
- X. Timeline: How long do you expect this project and its various components to take? Be precise in the timeline of your research and the completion of milestones by month.
- XI. Impact: State how your project would help those who need it. Include a broad impact statement about how your proposal will benefit the people or other subjects that you mentioned in the opening paragraph.