

JUMP ARCHES APPLICATION INSTRUCTIONS

This file should be submitted as PDF document via email to michalos@illinois.edu and seth.t.stutzman@jumpsimulation.org

Applications MUST have ALL required components and sections in order to be reviewed.

In the subject heading of the email mention: Jump ARCHES Last Name of submitting PI

COMPONENTS AND SECTIONS

A. TITLE OF PROJECT:

B. INVESTIGATORS:

1. Proposals may be submitted by faculty or senior investigator (Lead Investigator) affiliated with any University of Illinois at Urbana-Champaign Colleges or Institutes, health care providers of the University Of Illinois College Of Medicine at Peoria, and/or OSF HealthCare clinicians.

Lead Investigator (Who is submitting the proposal, UIUC, OSF, UICOMP):

- Name & Title (ex. Professor, M.D., Ph.D., etc.):
- Overarching Institution (OSF HealthCare, UIUC, or UICOMP)
- College (ex. GCOE, LAS, AHS, etc.):
- Unit if applicable (ex. Cancer Center at Illinois, Computer Science, Psychology, etc.):
- Phone Number:
- Email:

2. All proposals must identify two Co-Principal Investigators: one from the UIUC Grainger College of Engineering GCOE and one from among the healthcare providers within OSF Healthcare System or University of Illinois College of Medicine-Peoria UICOMP.

Co-Principal Investigator (UIUC-The Grainger College of Engineering):

- Name & Title (ex. Professor, M.D., Ph.D., etc.):
- Overarching Institution: University of Illinois at Urbana-Champaign
- College: The Grainger College of Engineering
- Department (CS, ISE, ECE, MechSE, etc.):
- Unit if applicable (ex. Cancer Center at Illinois, etc.):
- Phone Number:
- Email:

Co-Principal Investigator (OSF or UICOMP):

- Name & Title (ex. Professor, M.D., Ph.D., etc.):
- Overarching Institution (OSF HealthCare, or UICOMP):
- Department (ex. Surgery, Pediatrics, Radiology, etc.):
- Unit if applicable (ex. Cancer Center, etc.):
- Phone Number:
- Email:

Co-Investigators and Project Team Members (List all names)

- Name & Title (ex. Professor, M.D., Ph.D., Research Scientist, etc.):
- Overarching Institution (OSF HealthCare, UIUC, or UICOMP):
- College, Department or Unit as applicable:
- Phone Number:
- Email:

C. PROPOSAL SECTIONS:

A. Executive Summary (Please limit to 1 page)

State the application's broad, long-term objectives and specific aims with relevance to and how the project meets Jump ARCHES goals. Provide a succinct and accurate description of the proposed work that should be able to stand on its own (separate from the application). This section should be informative to other persons working in the same or related fields and understandable to a scientifically literate reader. Avoid both descriptions of past accomplishments and the use of the first person. Please be concise.

B. Research Plan: (This should be NO MORE THAN 6 PAGES TOTAL – It does not include references, facilities, Bios, budget, budget justification, funding plans).

- **Specific Aims:**

- List the specific aims of the proposed project as actions to be taken. A list of bullet points is acceptable. If they are sequential, place them in a temporal order. If non-sequential, place them in priority.

- **Research Strategy:**

- **Relevance/Significance:** Does this project address an important problem? If the aims of the application are achieved, how will scientific knowledge or clinical practice be advanced? What will be the effect of these studies on the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?
- **Impact/Innovation:** Is the project original and innovative? For example, does the project challenge existing paradigms or clinical practice; address an innovative hypothesis or critical barrier to progress in the field? Does the project develop or employ novel concepts, approaches or methodologies, tools, or technologies for this area?
- **Approach:** Are the conceptual or clinical framework, design, 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?
- Expand upon your project concept and explain your Approach to the reviewers. The following content is therefore recommended:

- Introduction/Background: State what is currently known in the specific field. This part should not be very long (3-5 sentences) but it should ground the reader in the subject of your research. Provide the reviewer with only the necessary details to understand why you are proposing the work. Remember to be concise and focused on only the key points.
- The problem: The gap in knowledge is the piece of information that is not known. State, clearly, the gap in knowledge that needs to be addressed. Convey that your project will fill this gap using the funding that you are requesting.
- The critical need: This need is important to increase medically relevant knowledge or improve health care. The critical need is the reason your proposal should be funded. Emphasize the significance of the problem you are trying to address. Additionally, it should be clear in this paragraph that your research proposes the next logical step to advance the field.
- Introduce solution(s): In this paragraph, your goal should be to introduce the solution that fills the gap in knowledge. It is critical to convince your reviewers that you (and your colleagues) have the solution to address the current knowledge gap and the expertise to accomplish this solution. Keep your wording simple, relevant, and to the point.
- You will want to address specific aims both short and longer term (as applicable).
- Hypothesis and Proposal Objectives: Your proposal should contain both of these components, depending on the goal. State your central hypothesis clearly, specifically, and with simple language. You want to demonstrate to the reviewers that you have a hypothesis-driven proposal that is testable. Describe how your project addresses the critical need, and clearly state the proposed solution. In general, avoid vague hypotheses because it will be unclear to the reviewers what you expect to determine with the proposed research.
- Rationale: Explain how you arrived at your central hypothesis (for example, 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.
- Qualifications: Briefly state why your experimental design and your team are the best to accomplish the project goals. You can mention factors such as your preliminary data, personnel qualifications, laboratory equipment, etc., but it is important to keep it concise.
- Innovation: Plainly state what is innovative about your project. What would completion of this proposal bring to the field that is not present currently? Expected Outcomes: Specifically state your expected outcomes for this project. What do you expect to see at the completion of each aim? Include this information only if you have not placed it in the Aims. In addition, you may either embed or attached supplemental imaging or other diagrams to support your statements.
- 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.

c. Special consideration proposals: *

- For proposals requesting consideration under *social and behavioral sciences, neurological sciences, or autism research* topics, briefly (1-page max) address how your proposal impacts these areas. Without this section, your proposal will be reviewed as a regular Jump ARCHES proposal.

For social and behavioral sciences proposals is strongly recommended the participation of a social and behavioral faculty from either UIUC or UICOMP

- Phase II applications: Previously funded Jump ARCHES proposals which have demonstrated potential for significant impact may submit an application for continued funding (phase II). If you have made good

progress on your work and used most of the funds or will use the funding by the deadline of this RFP, you may apply now for phase II.

Requirements are: submission of invention disclosure with OTM (if applicable) and evidence of submission or preparation of application for external funding.

D. Facilities: * (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: * A detailed budget and budget justification should be included in the proposal. Budget justification should match and complement the detailed budget spreadsheet. Please download the spreadsheet [here](#).

Note: No Overhead and No Tuition remission allowed.

G. Future Funding and Intellectual Property Statement* Since Jump ARCHES awards are seed grants, discuss opportunities for future or matching funding from beyond UIUC, UICOMP, or OSF, such as federal, state, county, or other governmental or non-governmental organizations (e.g. private foundations, industry). Identify specific programs and submission deadlines. Discuss plans for submitting invention disclosures of intellectual property ideas to [UIUC Office of Technology Management](#) and OSF Office of Innovation Management.

H. Biosketches* of Co-Principal Investigators are mandatory, as well of Co-Investigator's that will provide substantial contribution. Please submit biosketches using NIH style: View instructions [here](#).

I. Data Request Form: * Please fill out the data request from **if your projects require data** from OSF such as patient data, billing data, or other data that belong to OSF. You do not need to fill out this form for data you are generating in the course of the project e.g. in the course of a trial or experiment.

Please download form [here](#)

J. Suggested Reviewers: * Please list 2-4 possible reviewers from each of the Technical (UIUC) and Clinical (OSF/UICOMP) institutions. Name, Unit, Institution, Email.

***Not included in the 6 pages of the research plan**

Applications MUST have ALL required components and sections (A-I) in order to be reviewed.