

NAME OF FLC: FACULTY FOR IMMERSIVE TECHNOLOGIES

TOPIC AND GOALS FOR FLC:

We want to create a faculty learning community where UGA faculty and post-doctoral scholars can meet regularly and share common visions regarding the use of immersive technologies in education and/or research. Through the forum, we can share ideas, resources, and expertise.

DESCRIPTION OF FLC:

Rapidly advancing immersive technologies (including virtual reality [VR], augmented reality [AR], mixed reality [MR], extended reality [XR], etc.) bring a digital transformation in research and education, and several research groups at UGA are carrying out projects utilizing digital methods to create immersive experiences. At least six UGA research groups identified from a quick internet search share a similar vision regarding the future with these technologies and their immense potential as educational tools. However, there exist minimal interactions among these groups causing duplicated investment of resources, time, money, and efforts. Faculty members from the first five groups are included in this proposal and we plan to recruit additional members later from the group #6 and from a broader UGA community.

1. <https://STEMin3D.net> → Inseok Song & Nandana Weliweriya (Physics and Astronomy), Ania Majewska & Christopher Cleveland (Veterinary Medicine)
2. <https://vel.engr.uga.edu> → Kyle Johnsen (Engineering)
3. <https://virtualperceptionlab.weebly.com/> → Allison Howard (Psychology)
4. <https://digtl.uga.edu/> → Sergio Bernardes (Geography)
5. <https://ugaredlab.wordpress.com/> → Jessica Fernandez (Environment and Design)
6. <https://ugavr.com> → Sunjoo Ahn (Journalism) & Allan Tate (Public Health)

Through the “Faculty (Learning Community) for Immersive Technologies, we want to establish a communication channel (e.g., a dedicated website) to promote discussions across multiple disciplines and explore collaborations in the near future. We will establish a central repository for lesson plans, expertise, and other resources to enhance collaboration and creativity among UGA faculty using immersive devices in their classes. Our Faculty Learning Community will serve as an opportunity for instructors engaging in these techniques to communicate about best practices, state-of-the-art software, hardware, and our experiences, while also collaborating on the implementation of immersive technologies (e.g., VR headsets) in their respective disciplines.

By initially creating an inventory of individually-owned headsets and their applications across different units, we can systematize future funding requests for regular, timely updates with later model headsets, to greatly reduce the burden of securing VR, AR, MR and XR resources in the years to come. Ultimately, we plan that any faculty, even those outside of our FLC, could borrow state-of-the-art headsets from a centralized repository to use in the classroom or explore potential project ideas. We plan to support these faculty in bringing immersive technologies to their classes through lesson plans, activities, and other resources housed on our dedicated website.

ENGAGEMENT PROJECT:

Most of the current faculty members in this proposal are already carrying out education projects with immersive technologies. Some are experts in assessing educational benefits from using these technologies based on student data, some are experts in developing XR models, while others are experts in developing technological platforms, including the integration of immersive experiences into quantitative analyses and Geographic Information Systems. As the first engagement project, we will share our past experiences, then develop discipline specific XR-powered models that can be implemented in class during upcoming AY24-25 semesters. We then plan to gather students' data that will be analyzed within the scope of education theory, and the results can be published in research journals. As a representative entity for the immersive technology advocating faculty at UGA, we can approach potential external partners or funding agencies such as "Meta for Education". Eventually, we can nurture our FLC into a formal collaborative project encompassing education, engineering, research with immersive technologies and seek external fundings from NSF-IUSE, NSF-AISL, NSF-RITEL, NSF-ECR, etc.

PROPOSED BUDGET:

We propose to build a website for our FLC which can eventually be matured into a project team website serving across multiple disciplines at UGA. For this, we would like to purchase the web hosting service (\$300 for 3-year at GoDaddy.com). We can build the website by using the software structure used in developing <https://STEMin3D.net>, and we can pay a student to develop the website. A free, open-source software called [Dokuwiki](#) was used for creating the website and it can support dynamic server-contents including blogs, discussion channels, among others. Any remaining funds can be used to provide snacks during our regular meetings (every 3 weeks).

MEMBERSHIP RECRUITMENT:

Our initial group of faculty members already encompasses several disciplines, and we can "spread" the word through the friends-of-friends approach. Posting our FLC website at CTL and advertisement through other channels such as CTL newsletter is welcome.

PAST EXPERIENCES WITH A FLC

None of the current members have prior experience with FLC at UGA.

PAST EXPERIENCES WITH THIS FLC

This proposal is the first effort to establish our intended FLC.