MINI INTERVIEW WITH FRANK WÜERTHWEIN, DIRECTOR SDSC, PROFESSOR OF PHYSICS AND HDSI:

FRR: What might the partnership between San Diego Supercomputer Center (SDSC) and Halıcıoğlu Data Science Institute (HDSI) mean to PIs as they develop their research and competitive proposals?

FW: SDSC adopts innovations from industry and academia in the areas of software, hardware, computational & data sciences, and related areas, and translates them into cyberinfrastructure that solves practical problems across any and all scientific domains and societal endeavors. We are globally renowned innovators in translating innovation into practice.

We are solutions focused, and can help you assemble the expertise your proposals & projects require, including data science expertise from HDSI, and cyberinfrastructure expertise from SDSC. We can facilitate collaborations between UC San Diego researchers and their external partners from industry, the public sector, and academia on our platforms.

FRR: What services, equipment, network or other support does or could the partnership bring to the project or proposal development process?

FW: SDSC operates roughly 200,000 X86 cores, close to 1,500 GPUs, and in excess of 50PB of storage across multiple compute and storage systems. This capacity is interconnected via Terabit/sec networks inside the SDSC data center, and multiple 100Gbit/sec networks to the outside world. This raw capacity is made available to researchers at UC San Diego and nationwide via a variety of platforms and services to minimize the threshold for access, and the cost to get started. We are happy to engage with projects that require anything from free access to general community platforms to custom designed systems for 10's of millions of $$.

Recently, SDSC deployed a dedicated hardware platform, called "Voyager", for Artificial Intelligence, and especially modern machine learning. HDSI has been growing significant expertise across a wide range of AI related areas within the last few years. The two together thus have substantial machine learning expertise and technology that may be applicable to any domain.

FRR: Do you work across all divisions of the university?

FW: Yes, HDSI and SDSC have no preferred divisions to work with. We are open to all.

FRR: When should a PI reach out to one of the centers to discuss an idea?

FW: Anytime!

For large proposals, it makes most sense to engage as early as possible. We routinely get involved during the initial proposal creation phase for large proposals. This allows us to collaborate with the PI and Co-PIs on how best to maximally strengthen the proposal via our contributions. For more modest proposals, we are happy to write letters of support to the extend allowed by the solicitation.

We are also happy to be contacted anytime for using our various services after proposals are awarded. There is a range of pricing from free "hunting licenses" to modest size start-up allocations, to services for sale.

FRR: Does the HDSI or SDSC have seed funding or other service support for PIs to know about?

FW: Yes, and no. It's complicated. As mentioned above, SDSC is funded via a number of different projects to train the national scientific community to use the systems and platforms we operate. Some of these programs may be leveraged to help UC San Diego researchers start new projects. One such program is HPC@UC [1], others include PRP [2], and OSG [3]. All three of these programs are "free" to their target communities within their very broad target scopes. They can thus be leveraged to seed new projects.

However, at the same time, SDSC is a 100% soft-money funded organization. We only eat what we hunt, and thus can only provide "seed funding" where such funding is covered within the scope of funded programs.

[1] https://www.sdsc.edu/collaborate/hpc_at_uc.html
[2] https://pacificresearchplatform.org
[3] https://opensciencegrid.org/about/open_science_pool/