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Persimmon Room

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Next generation cyberinfrastructure resources for bioinformatics

Abstract: This talk will focus on how you can use Jetstream to accelerate your biological research and enhance your teaching. Jetstream is a first-of-a-kind cloud system funded by the National Science Foundation and by contributions from the several participants that created and now operate this system. It is a first-of-a-kind system in the sense that it is the first cloud system funded by the NSF accessible to and designed to be a resource for the national research community. It's a science cloud designed for people who need more computing power than they find easily in their own labs, but don't need to use thousands of processor cores and don't want to have their jobs wait for hours or days in a batch queue. Jetstream uses the Cyverse Atmosphere interface to make it easy for researchers and research students to find a pre-existing Virtual Machine that is built to do what you want to do, launch that VM, and use it interactively. Jetstream was designed to be useful to the complement of people who already use the major NSF-funded supercomputers – and the biology research community (sans protein folders) is one of the top user communities of Jetstream. Johns Hopkins University and the University of Arizona are funded partners in this project specifically to support deployment and use of Galaxy and CyVerse, respectively, on this system. The overall project is led by the Indiana University Pervasive Technology Institute. In this talk, I'll focus on what Jetstream is, what it does of particular interest to biologists, and how to get access to use it – so that you can walk away from the talk, do a bit of typing, and be started using Jetstream at the beginning of next week.

Biography: Craig Stewart is an IU Biology Ph.D. (ecology and evolutionary biology). Stewart has worked as a staff member in the IU computing system since 1985, and is now the Executive Director of the Pervasive Technology Institute, Associate Dean for Research Technologies, and the PI for Jetstream. Stewart has been in leadership roles in advanced computing at IU since 1996, and since 2005 has had overall responsibility for IU's research computing environment. He is also an adjunct professor in informatics, medical genetics, and biology, and has been a visiting faculty member in Computer Science, University of Stuttgart and a Fulbright Senior Scholar at the Technische Universitaet Dresden (Germany).

