3D MORPHOMETRICS AND IMAGE ANALYSIS WORKSHOP

Location: University of Washington, Friday Harbor Marine Laboratories, San Juan Island, WA
Course Dates: Sunday-Saturday, August 25-31, 2019
Course Website: https://SlicerMorph.github.io/2019_Summer_Workshop
Application deadline: May 1st, 2019 (11:59 PDT)
Online Application URL: http://bit.ly/SM-2019-application
Admission notification: May 15th, 2019

Target Audience: Course is directed for students, post-docs and junior faculty who are interested in conducting quantitative research into organismal form and function using 3D imaging. It is also appropriate for more established researchers who are looking for open-source alternatives to the proprietary pipelines they have been using. We anticipate more applicants than we can accommodate. Applicants whose host institution lack such curriculum and/or resources might be given preference.

Course Contents and Structure: Course is a combination of formal didactics (in the morning) and computer labs (in the afternoon and evenings). Guest lecturers will cover topics in theory of statistical shape analysis, applied imaging, and high-throughput image analysis. Labs will cover all aspects of conducting specimen-based research using 3D imaging. Practical topics (e.g., image processing and segmentation, visualization) will be taught using the open-source **3D-Slicer** visualization suite and the **SlicerMorph morphometrics toolkit** (statistical shape analysis) Additional lab topics include using 3D specimen repositories to obtain data, tools and methods for collaboration and reproducible research, introduction to data analysis through R/Python. Course material will be focused on volumetric (e.g., CT or microCT) 3D datasets, but will be equally applicable to data from 3D surface scanners. Final program and course content will be announced by April 15th on course website.

Expectations from attendees: Course format will be highly collaborative, and labs will be done in small teams. Prior experience with the tools is not expected, but will positively impact the learning experience. Students are expected to come with a project (and/or bring a sample to be imaged with microCT) and present at the beginning and the conclusion of the workshop as lightning talks. Each attendee should bring a recent (last two years) laptop running Windows, Mac or Linux OSes (no netbooks or tablets). More information about computer requirements will be provided to the selected applicants.

Logistics: Selected applicants will be notified by May 15th. Due to the logistics of getting to the island and the pace of the workshop, partial attendance is not possible, and selected participants need to confirm their travel plans in two weeks or forfeit their admission. Participants will be housed at the shared dormitories on site. It is expected that the attendee will arrive FHL by Sunday August 25th PM and be present for the pre-course check-in/registration in the evening. Workshop will end Saturday evening. Attendees need to check out from dorms by noon the following day. Please consider these requirements when applying.

Course Fees and Travel Support: There are no course registration fees and all lodging and meals are covered thanks to generous support from the National Science Foundation Advances in Biological Informatics program (ABI-1759637, Adam Summers & Murat Maga). A limited number of scholarships to offset the cost of travel is available for under-represented minorities (URM) in STEM. Please indicate your interest during application.

Contact information: If you have any questions, please contact us at SlicerMorph@outlook.com and one of our course directors will respond to your inquiry.

Ready to apply? Submit your application. Please be prepared to give a short description of your research background, your career goals, your mentor's contact information (for non-faculty applicants) and provide a CV (two-page limit, NSF Biosketch format is preferred) as PDF. You will need an account registered with Google to upload documents.