Report for Video Genomics Online Faculty Working Group in Fall 2017.
Hong Qin,
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1.Overview

In Fall 2017, Dr. Hong Qin led an faculty online working group to exchange experiences and ideas about developing video tutorials for computational genomics education and training. This online faculty group is organized under the auspice of the QUBES Faculty Mentoring Networks. This online group of faculty met roughly bi-weekly from August to October.

2.List of Participants

1. Hong Qin, University of Tennessee Chattanooga, hong-qin@utc.edu,
2. Bob Sheehy, Radford University, rsheehy1@gmail.com ,
3. Mark McCormick, University of New Mexico, mark.mccormick.01@gmail.com,
4. Pedro E Miura, University of Nevada Reno, pmiura@unr.edu
5. Xuexia Wang, University of North Texas, xuexia.wang@unt.edu
6. Barry Grant, University of California San Diego, Bjgrant@ucsd.edu
7. Bernadette Connors, Dominican College, bernadette.connors@dc.edu
8. Laura Harris, Davenport University, lharris86@davenport.edu

3.Meetings Organized

1) 8/23/2017. Introduction, goals and expectations, choices of screencast software. Recording at https://youtu.be/LFV0WbT62A0
2) 9/13/2017 Go over developed YouTube videos. Recording at https://youtu.be/rBO3Y7pO30g
3) 9/27/2017 Discussed video tutorials and topics, exchanged experiences of different screencast tools. Recording at https://youtu.be/5KfueCxX7Dw
4) 10/11/2017 Discussed ways to address copy-right materials for developed videos, computing resources, video lengths, how to embed quizzes in video, how to track students view times. Recording at https://youtu.be/d1-5vBFbG1Q
5) 10/25/2017. Discussed assessment tools, common survey questions, list of high-priority videos, and follow-up issues. Recording at https://youtu.be/ND8uX_vaxcM

4.Project Outcomes

4.1 Developed tutorial videos

Dr. Laura Harris developed a YouTube Channel for the online group at
https://www.youtube.com/channel/UCEE6oecA8YKQip9VaqOOHbg
https://www.youtube.com/watch?v=hY_duqJuNqQ&list=PLO7OUG94gzCx0qJY7lyTS_fCsGjTrHR8r

Sample videos include Introduction to QUBES by Dr. Rob Sheehy at
https://youtu.be/NAEn991xlt0 , Circular RNA and Aging by Dr. Pedro Miura at

https://youtu.be/JBLRLr_9VWI, What is Bioinformatics by Dr. Barry Grant at https://youtu.be/gJNXQfpErLY , Simple Heatmap with Morpheus by Dr. Laura Harris at https://youtu.be/nPUyZaxjLJs , basic programming using Java by Dr. Hong Qin at https://youtu.be/ofyxtKkruXI (See Figure 1).
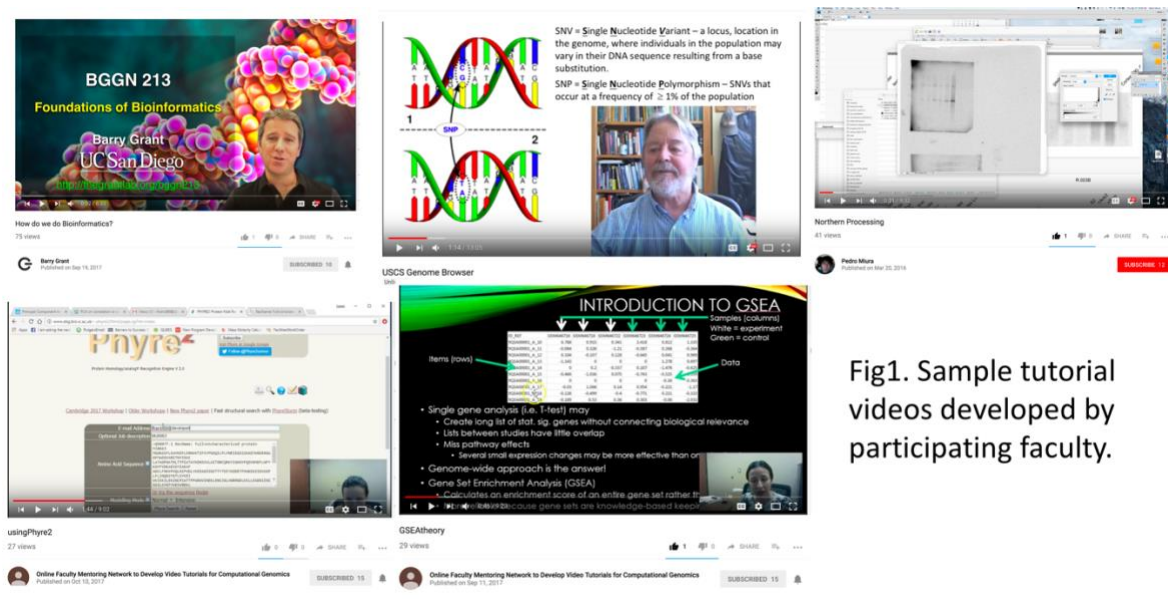

Fig1. Sample tutorial videos developed by participating faculty.

4.2 Submitted proposal.
Dr. Qin submitted an NSF BD Spoke proposal with the support of the online working group.

4.3 Website.
Group project website was developed at QUBES website at https://qubeshub.org/groups/genomicsvideos .

4.4 We developed a short list of high-priority tutorial videos
   1) Using UCSC Genome browser to explore SNPs, https://youtu.be/O_J4-64U4vw by Bob Sheehy.
   2) RNAseq analysis
   3) Linux/Unix command lines usage for bioinformatics
   4) R for bioinformatics
   5) Tutorial to develop a pipeline for bioinformatics analysis

We may refer to the NIBLSE core competencies for some of the ideas.
https://qubeshub.org/groups/niblse/resourcecollection/core_competencies

4.5 Some lessons learned:

For future online working groups, reminding emails should be sent before meetings, and follow-up emails should be sent to remind participants on tasks. Once a meeting schedule is set, it is unlikely for the group to reach consensus to change the schedule.

5. Unfinished businesses

1) How to track of student watch times of videos through institution's Learning Management Systems? Currently, student tracking can only done through LMS.

2) How to develop interactive videos? We may explore this feature through https://www.playposit.com/ or https://edpuzzle.com/ .

3) We need to develop common survey questions and problems sets to assess video tutorials.

6. Acknowledgement