

Tuesday, November 29, 2016 Birds of a Feather Sessions

Time Slot	Topic	Description	Location
All Day	Footage for Big Data BioMedicine: The Movie, Part 2	If you would like to be interviewed for the next version of the BD2K Big Data movie, come to this location.	1 Forest Glen
Noon - 1:00 p.m.	Systems Biology in Big Data Analysis	A discussion of systems biology techniques (from multi-omic/big data integration to computational modeling) in disease assessment and stratification.	7 Brookside A
	Bioconductor	The BOF will focus on issues pertaining to creating, submitting, and maintaining packages intended to be part of Bioconductor.	4 Middlebrook
	Helping Biomedical Scientists Acquire Data Science skills	The purpose of this BOF is to share ideas about how we can help our colleagues gain a working knowledge of data science so that collaborations between data scientists and biomedical scientists can be more fruitful.	3 White Oak A
	Mobile Sensor Data-to-Knowledge (MD2K)	Mobile sensors present unprecedented visibility into health states, behavioral, contextual, and environmental risk factors in the natural environment of individuals that are the largest determinant of health outcomes. They also present novel opportunity to deliver personalized just-in-time interventions on the mobile device. Finally, novel technologies developed in the BD2K program now enable reliable collection of high-frequency mobile sensor data and real-time analytics to trigger timely interventions. The entire community can now incorporate such tools to bring in mobile sensor data in their data collection protocols. This session can expose such capabilities to the audience and allow them to discuss emerging opportunities to incorporate mobile health in their ongoing and future research. MD2K Center of Excellence will be glad to lead this session.	8 Lower Level
	Data Visualization	Come discuss data visualization -- what are the existing tools? Where are the gaps?	2 White Oak B

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4:30 p.m. - 5:30 p.m.	Machine Learning Working Group (Centers-focused)	BD2K CCC has recently set up a new Machine Learning (ML) Working Group (WG), coordinated by Wei Wang@UCLA and Jiawei Han@UIUC, which has started monthly teleconferences/seminars and other activities. At this BOF, the coordinators will lead a discussion of future activities to promote collaborations among multiple BD2K Centers for research exchanges related to machine learning. Let's make the work more beneficial to our effective transformation of Big Data to Knowledge.	4 Middlebrook
	Software, Analysis, and Methods Spillover	This BOF is to hold space for the Software, Analysis, and Methods presentations, which are expected to run over the allotted time. Once the presentations are finished, there will be time for questions and discussion.	Main Level Salons F-H
	BD2K-wide Data Indexing Group	This is a meeting organized by BioCaddie.	5 Great Falls
	Infrastructure and Emerging Technologies	This is an IT-focused BOF session, where participants can talk about their platforms and the different technology stacks they are using. Discussion could also touch on persistent challenges, solutions/vendors that seem to work (or not work) well for the kind of big data they work with, and emerging technologies with exciting potential.	2 White Oak B
5:30 p.m. - 6:30 p.m.	Movie Premier: Big Data BioMedicine	This short, 20-minute film about Big Data was developed as part of the Training Coordination Center.	Main Level Salon E
	Multi-omics Data Analysis	This BOF will be for those interested in the aggregation and analysis of multiple types of 'omics data.	2 White Oak B
	Making Your API FAIR	This BOF will be focused on learning about and implementing best practices to make your web-based (e.g., REST) API FAIR. Topics to be covered: vision for the Commons, the smartAPI metadata specification, the enhanced data-driven Swagger Editor to craft and validate your API metadata, the smart API repository. Brought to you by the Commons Framework Pilot API Interoperability Working Group.	8 Lower Level

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	Metadata, Ontologies, and Data Standards	This BOF will discuss issues around metadata, ontologies, and data standards.	9 Salon A Foyer
	Training the Next Generation of Biomedical Data Scientists	The purpose of this BOF is to share opinions about the knowledge and skills that our biomedical data scientist PhD students should have by the time they graduate.	7 Brookside A
	Student Mixer (BD2K T32/T15 Students only)	The purpose of this BOF is for graduate students to meet one another to discuss topics of common interest. Please come prepared to give a 1-2 minute elevator speech describing who you are and what you do. All graduate students, whether funded on a T32/T15 or not, are welcome. Self-organization into small groups for subsequent dinner outings is expected.	3 White Oak A

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Noon - 1:00 p.m.	Imaging Informatics	Discussion of integration of multimodality imaging information and DICOM data into Big Data applications.	7 Brookside A
	Natural Variability of Disease Characterization Via Big Data	For the first time in history, large datasets are coming online that would allow massive samples of patients with a common homogeneous disease to document the natural fluctuations in their disease. Leveraging mHealth, massive data collection methods, and advances in statistical techniques, we are now able to quantify the variability expected in different diseases. This quantification, in turn, will inform predictive models as well as help interpret results from any study or clinical management of that disease.	3 White Oak A
	Commons Credits Pilot Portal Demo	Organized by MITRE, this BOF could include a demo of the Commons Credits Pilot Portal, if we have good external Internet access.	9 Salon A Foyer
	Eyewire	Let's talk about general lessons learned from 4 years of eyewire!	5 Great Falls

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	Biomedical Natural Language Processing	What are the best ways to teach students about natural language processing? We would like to host an NLP summer school and are interested in knowing what amount of interest there is in a remote experience for NLP training. We can share our experience with a 2-week summer school in NLP in the context of Data Science, brainstorm about online materials and datasets, and map out the best way to address training in this important area.	4 Middlebrook
2:30 p.m. - 3:30 p.m.	Statistical/Machine Learning	The purpose of this BOF is to discuss usage of supervised and unsupervised learning in making predictions: pros and cons; packages; needs. Discussion could include identification of any areas where further work is needed.	Main Level Salons F-H
	Cloud-Agnostic Workflows/Tools, Execution Frameworks, and Emerging Standards for the Commons	This BOF is focused on cloud-agnostic tools/workflows and execution infrastructure. We could examine emerging API standards for exchanging tools and workflows in a cloud-agnostic way and executing tasks/workflows across clouds. We can explore emerging open source implementations of these standards such as Dockstore and Consonance and the role they might play in the Cloud Commons efforts. This BOF might include a tutorial on Dockstore if there's interest.	7 Brookside A
	Planning, Metrics, and Evaluation	Following on the Evaluation BOF session held during the 2015 AHM, discussion among the grantees can continue on this topic. The NIH recently released an RFI about "metrics to assess value of biomedical digital data repositories," which is relevant.	2 White Oak B
	Impact of BD2K on Science and Society	Review of the BD2K program's impact on various fields of science and impact on the daily life of U.S. and World citizens.	5 Great Falls
	Life Science Publishers and Data Sharing	Discussion on how to incentivize and encourage life sciences publishers to make data archiving a requirement of publication.	4 Middlebrook
3:30 p.m. - 4:30 p.m.	Meeting Between Centers' Pls and Phil Bourne	This is a closed meeting between Phil Bourne and the Principal Investigators of any large Center funded by BD2K.	3 White Oak A

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3:30 p.m. - 4:30 p.m.	Population Health Informatics	Much progress in the application of Big Data Science has been made in the molecular and clinical medicine domains, but these advances have not been as widely applied to population level research. We could discuss what opportunities exist to apply Big Data methods and advances to population level research and public health practice.	9 Salon A Foyer
	The Utility of Multi-omics Data Analyses in Clinical Study	With increasingly large amounts of multi-omics data collected from the same subject, it is interesting to integrate them in the analysis. However, such integration is challenged by the ultra-high dimensionality. It would be helpful to have discussions on the related statistical/computational issues, how to foster the collaboration between researchers with expertise in different types of omics data, and how to incorporate this into the training and education programs of biomedical scientists in big data.	6 Brookside B
	Best Practices in Accessing & Using Public Data: The Data Scientist's Guide to NIH/Public Databanks	National and International biomedical data are stored across a variety of databanks and public repositories. As new data are generated and new methodologies discovered, more and more data + datatypes will be deposited online. Regardless of whether one is a student trainee or seasoned biomedical data scientist, learning and keeping abreast of these disparate sources, choosing which ones/combinations to use, and following best practices in usage (accessing, preprocessing, integrating) will be challenging. A guide/tutorial is needed to explain all of the above in a centralized manner at various user-selected levels of detail.	8 Lower Level
	Open Innovation, Open Data, and Crowdsourcing	This BOF is for open advocates to discuss the state of the field and its future, including open innovation, open data, open source, open content, and crowdsourcing.	2 White Oak B

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