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| **Summary of Presentations by College or Centers/Institutes**   * CEOAS Erica Fleishman * COE Joseph Agor, Larry Cheng, John Parmigiani, Tyler Radniecki, Prasad Tadepalli, Weng-Keen Wong * CLA Hilary Boudet, Todd Pugatch, Shaozeng Zhang * CPHHS Carolyn Aldwin * COS Benjamin Dalziel, Elisar Barbar, Sharmodeep Bhattacharyya * Vet Med Brian Dolan * COP Jessina McGregor * C&I Christopher Nichols, Julie Risien   Proposed facilitation format: Run the discussion session in the form of a series of panels on 5 themes (10 mins each) followed by an open discussion period (10mins)   * + **Understanding of the virus and diagnosing the disease** (panelists: Barbar, Cheng, Dolan)   + **Virus transmission, public surveillance, and finding patterns** (panelists: Dalziel, Fleischman, Radniecki, Wong)   + **Novel approaches and enabling technologies** (panelists: Bhattacharyya, Parmigiani, Tadepelli)   + **Impacts and mitigation on sectors, such as health care, education, energy**  (panelists: Agor, Boudet, Pugatch, Risien, McGregor)   + **Impacts and coping within communities, including various at-risk or marginalized communities** (panelists: Aldwin, Nichols, Zhang)   + Open discussion: What are the barriers? What would help catalyze further progress?   Many of the researchers clearly do work that addresses more than one of the above themes, and we hope that everyone will contribute to the conversation on each theme. There is much opportunity to deepen our understanding of the work on our campus and see connections that make the work more rigorous and impactful. | | |
| **CEOAS** | Erica Fleishman | OCCRI conducts research on climate change and adaptation to climate change of humans and other organisms and systems. If other researchers would like to explore relations between climate and COVID-19, we may be able to provide expertise and support. Recognizing that adaptation to uncertain climate, climate extremes, and climate hazards or risks is transferable or applicable to adaptation to uncertain diseases, we can provide expertise and support. |
| **COE** | Joseph Agor | Algorithm development to solve optimization problems (linear, integer, multi-decision maker optimization problems).  Looking for connections between optimization and machine learning/data mining. Data mining techniques can be used to look for patterns related to COVID-19 (e.g. outbreaks and disease progression patterns) Optimization methods can be used to develop decision support tools for system and resource management for COVID-19 (e.g. volunteer management/allocation and supply chain operations for PPE) |
| **COE** | Larry Cheng | My lab is developing nanomaterials and biosensor technologies for point-of-care diagnostics. The research including molecular probe synthesis and device prototyping for nucleic acid or immuno-based detection.  We would need collaborators that can provide viral antigens or specific antibodies against the virus for the early development and tests. |
| **COE** | John Parmigiani | My lab focuses on the creation of mechanical and electomechanical devices to meet client needs. To the extent that any COVID-19 research could benefit from device design and fabrication my lab could participate.  My lab (the Prototype Development Lab) engineers, designs, and builds mechanical and electromechanical devices for startups, established companies, and university researchers. The PDL uses cutting-edge robotics, additive manufacturing techniques, and digital- manufacturing equipment and software to efficiently design and build the prototypes needed to move from a market worthy idea to an actual physical embodiment to attract investors, obtain patents, create a product, and move to market. The focus of the lab is accessing OSU technical expertise to apply engineering principles to create prototype devices for sponsors. |
| **COE** | Tyler Radniecki | We have access to storm water and sewer samples (in sewer pipes and through wastewater treatment plants) across the state. We have RT-qPCR capability in the lab to detect SARs-CoV-2. |
| **COE** | Prasad Tadepalli | Machine Learning, Artificial intelligence, Computer modeling of disease spread and prevention. EECS has a number of faculty members in AI and Machine Learning who may be interested in these problems |
| **COE** | Weng-Keen Wong | Machine learning: specifically anomaly detection, spatio-temporal data analysis, explainable AI.  I have worked extensively in the past at the intersection of machine learning and epidemiology, specifically in syndromic surveillance. My past work has involved machine learning algorithms to detect the onset of disease outbreaks from Emergency Room visits and pharmacy sales. My current research interests that could be of use to Covid-19 research include anomaly detection (detecting unusual events), spatio-temporal data analysis (detecting clusters of cases in space-time), species distribution modeling (estimating underlying abundance of cases from observed cases) and explainable AI (explaining the outputs of AI algorithms). |
| **CLA** | Hilary Boudet | Behavior changes; electricity usage; changes in attitude toward energy polices and/or smart technology adoption. In collaboration with Stanford engineering faculty and students, we are exploring changes in electricity and energy usage as a result of stay at home orders. |
| **CLA** | Todd Pugatch | Education program/policy impact evaluation in US higher education and K-12 developing countries  Can entrepreneurship education mitigate the economic impact of COVID-19 on young adults in developing countries? Also interested in using behavioral economics to address challenges facing OSU students in response to pandemic. |
| **CLA** | Shaozeng Zhang | Medical anthropology, health and socio-economic inequity, geospatial analysis, policy analysis, mixed methods  Mixed-methods analysis, simulation-based modeling, and location-based prediction of later waves of epidemic outbreak in and socio-economic consequences of COVID-19 on vulnerable populations, especially the homeless, the elderly, and ethnic minority populations in the U.S. and abroad |
| **CPHHS** | Carolyn Aldwin | Aging, Stress, coping, social support, and health |
| **COS** | Benjamin Dalziel | Infectious disease dynamics at the interface of theory and data |
| **COS** | Elisar Barbar | **Structure, Assembly, and Regulation of Dynamic Protein Complexes** |
| **COS** | Sharmodeep Bhattacharyya | Statistical and epidemiological modeling and data analysis |
| **Vet Med** | Brian Dolan | Cell culture, flow cytometry, genetic manipulation of cell lines. |
| **CPH** | Jessina McGregor | I am a PhD Epidemiologist and do not do wet lab research. However, my focus is on infectious diseases. We maintain a data repository of OHSU patient data that could be leveraged for SARS-CoV-2 research. The majority of my research is clinical research, primarily focused on multidrug-resistant pathogens, antibiotic resistance and infectious diseases pharmacotherapy.  We have existing collaborations with OHA, OHSU, and other healthcare settings. Our group has strong statistical/data management experience and work routinely with human subjects/HIPAA-protected data. We maintain a data repository of OHSU patient data that we utilize for our research. |
| **Center for Humanities** | Christopher Nichols | Historical and contemporary context. Public humanities and public-facing commentary. History of the influenza pandemic of 1918-19.  History of the 1918-19 influenza pandemic in the United States and worldwide. Commentary and analysis related to insights and lessons that might be learned from the influenza pandemic of 1918-19 and especially nonpharmaceutical interventions, politics, and culture. Doing public commentary for OPB, NPR, Washington Post, Oregonian, Associated Press, New York Times, BuzzFeed, Oregon Historical Society, World Oregon (World Affairs Council). |
| **STEM Research Center** | Julie Risien | Our Center Staff can collaborate on social science and education research related to communication of COVID-19 related science, assessing perceptions and behaviors of the public, and understanding learning in all different settings.  Our Center can collaborate on research providing analysis, public communications, proposal development and conceptualization, etc. Our staff are fully grant funded without teaching responsibilities so we can maneuver rather quickly to participate in collaborations. The Center’s work is distributed across local, regional, and national projects with a portfolio of applied research, evaluation, initiatives, and services that are highly collaborative and partnership-driven. We investigate phenomena and progress in five critical areas: Institutional Transformation; Science and Society; STEM Teaching and Learning; Professional Learning and Growth; and Learning Ecosystems. |