

# AIBBC 2020 ONLINE CONFERENCE & TRAINING in the COVID-19 ERA

## Workshop Courses

**Thur, Nov. 5th, 2020**

Instructors	Session	Session title	Instructor (s) in charge	Contents
<b>COURSE 4 POINT OF CARE DIAGNOSTICS</b>				
<b>Instructors</b> Prof. Aman Rusom ( <i>KTH Royal Institute of Technology, SWEDEN</i> ), Prof. Tamara Kinzer-Ursem ( <i>Purdue University, USA</i> ), Prof. Jacqueline C. Linnes ( <i>Purdue University, USA</i> ), Dr. Melinda Lake ( <i>Purdue University, USA</i> ), Dr. Eddy Odari ( <i>Jomo Kenyatta University of Agriculture and Technology, KENYA</i> )				
14:00~14:30	Session C4-1	Introduction to point-of-care diagnostics (30 min)	<b>Tamara/Jackie/Melinda</b>	COVID-19 has brought much attention to diagnostics generally and the need for rapid point-of-care diagnostics. This session will provide an overview of various types of point-of-care diagnostics that are available, the types of analytes that they detect, and the advantages and constraints posed by various testing methods.
14:30~15:00	Session C4-2	Part 1: Developing design specifications and designing for the end-user (30 min)		This session will describe how to determine criteria from both top-down and bottom-up approaches. From there, considerations of how the diagnostic technology has to function, the user, the environment, what potential failure modes might be encountered, and how to test for these will help determine design specifications that ensure robust, user-friendly assays with the necessary sensitivity and specificity.
15:00~15:30	Session C4-3	Emerging technologies (30 min)		The diagnostic landscape is changing quickly and we will describe new techniques, assays, applications, and technologies that are emerging.
15:30~16:00	Session C4-4	Part 2: Developing design specifications and designing for the end-user (30 min)		Developing good design input is critical to generating functioning and usable technologies including diagnostics. We will discuss various methods to uncover critical user needs and barriers to adoption and update.
16:30~17:00	Session C4-5	Part 1: CD Microfluidics for point-of-care diagnostics (30 min)	<b>Aman</b>	We will demonstrate how mobile devices can be designed to specifically meet diagnostic needs at resource-limited settings.
17:00~17:30	Session C4-6	Part 2: POC covid test on platform specifically designed to meet the needs at resource limited settings (30 min)		At resource limited settings, point of care devices require a very low-cost, robust and easy to use platform that is preferably capable of automating and multiplexing intricate bioassays. This session will demonstrate a POC covid test on platform specifically designed to meet the needs at resource limited settings.
17:30~18:00	Session C4-7	Part 1: "Valley of Death" in the development of diagnostic tools (30 min)	<b>Eddy</b>	Taking an innovation from the lab to the market is hard in any discipline - for this reason a lot of innovative ideas have remained on shelves in the labs or as publications in high end journals. In this era of COVID-19 pandemic the big question remains - how do we ensure timely transition of ideas from the labs to those who urgently need them? This interactive session will explore the challenges faced by researchers and innovators mainly from LMIC and offer practical solutions of how to navigate such challenges in the field of medical diagnostics.
18:00~18:15	<b>CLOSING CEREMONY</b>		<b>USE THE ZOOM LINK FOR OPENING AND CLOSING CEREMONY</b>	