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**Material filtration efficiency for effective respiratory protection in time of COVID-19** N. BUSTOS, J. MONTGOMERY, L. BOUROUIBA, The Fluid Dynamics of Disease Transmission Laboratory - Massachusetts Institute of Technology — In the time of COVID-19, ad-hoc face-coverings and medical masks have become prevalent due to shortages or conservation of personal protective equipment (PPE) for healthcare workers. It is important to guide choice of materials and designs of face-coverings based on systematic and standardized detailed characterizations of particle penetration, flow, and breathability. In this talk, we present the results of systematic and multi-modal measurements of filtration efficiency, breathability, in addition to flow visualization for a range of common materials and their combinations and discuss the implication for do-it-yourself face-covering or resource limited PPE designs in time of shortage.

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