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**TUFAIL MALIK**, Khalifa University of Science, Technology and Research

*The Impact of a Vaccine and Pap Screening on the Human Papillomavirus Transmission and Cervical Cancer*

The talk will address the problem of the transmission dynamics of human papillomavirus in a population. A new sex-structured model, which takes into account the associated multiple cervical intraepithelial neoplasia stages, will be used to assess the combined impact of Pap cytology screening and a vaccine on the disease dynamics and the associated dysplasia. Rigorous qualitative analysis will be presented. Simulation results, using a realistic set of parameter values, will also be discussed.