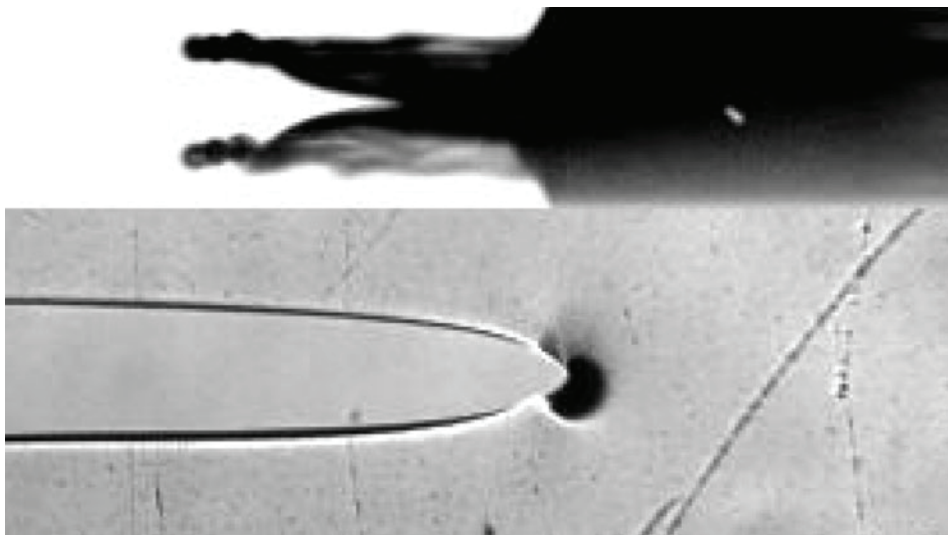


<https://uni-due.zoom-x.de/j/64228670246?pwd=RjVQeFNIUkRKRkpiNVpKYXhJaFNLdz09> (gilt für alle Vorträge)

## Make it and break it: Contact and Cracks at soft interfaces

Prof. Dr. John Kolinski, Ecole polytechnique fédérale de Lausanne (EPFL)



Some of the most pressing challenges in engineering science arise when materials are adjacent to one another - from the bottom of an impacting droplet to the separating faces of a crack. Here I will discuss two vignettes on these important topics: first, a calibrated, nano-scale, direct measurement of the intervening air film at the critical juncture of contact formation during droplet impact, and second, the toughening that can result from geometric complexity at the tip of a propagating crack. These seemingly disparate systems are deeply connected on a variety of levels, from their sensitivity to defects to the propagating singularity that defines the mathematical problem of contact line and crack propagation. The talk will conclude with a discussion of perspectives and some puzzles that remain open despite recent progress.