

## IBPT Seminar

Tuesday, Sept 14<sup>th</sup> 2021, 2 pm

[MS-Teams](#)

# Transverse Coherent Stability in Synchrotrons

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Intense bunched beams in synchrotrons interact with their surroundings via wake fields. This interaction can lead to eigenmodes of the circulating bunches becoming unstable.

We discuss head-tail instabilities as well as the coupling of head-tail modes with the resulting TMCI (transverse mode coupling instabilities). Common mitigation techniques are explained as well as the effect of space charge, i.e. the beam self-fields. In this context, selected results in recent research progress and open questions will be pointed out.