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Benjamin Briggs* (briggs@math.utah.edu) and **Srikanth Iyengar**. *Some homological characterisations of complete intersections*. Preliminary report.

For an ideal I of finite projective dimension in a local ring R , Quillen conjectured that I is complete intersection if and only if the cotangent complex of R/I over I has finite projective dimension. This was established by Avramov in 1999. Vasconcelos made a similar conjecture: I is complete intersection if and only if the conormal module I/I^2 has finite projective dimension over R/I . I'll try to explain why the similarity between these conjectures is not just superficial, and how you can prove together using the "cotangent modules" which generalise I/I^2 . This is joint work with Srikanth Iyengar. (Received January 16, 2021)