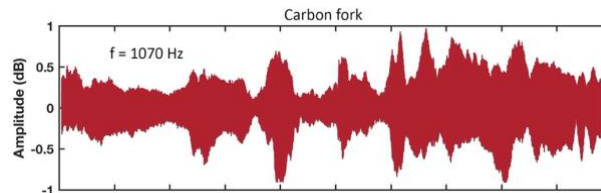


## Brake Squeal in Bicycle Disk Brakes



Some brake systems have the annoying habit of making a very high pitched and loud noise while braking, which is called 'brake squeal'. Such brake squeal is usually caused by friction induced vibration. Some seminal work on brake squeal in bicycle rim brakes has been done by Robin Walhout [1] and Jan Groenhuis [2]. We like to extend that work towards bicycle disk brakes.

### Assignment:

Study the literature on brake squeal in disc brakes in general and use the experimental setup as designed by MSc student Robin Walhout [1] to measure which parts of the bicycle are vibrating during disc brake squeal. Based on these measurements develop a model which can predict brake squeal in bicycle disc brakes.

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[1] Robbin Walhout, "Brake Squeal, A study on the fundamental cause of bicycle brake squeal", MSc thesis, Delft University of Technology, May 2019.

[2] Jan Groenhuis, "Piepende remmen metingen", 17 Dec 2019, Royal Gazelle Internal Report.