

## **'Measurement' of pressure spike & lubricant rheology**

In order to predict and optimise highly loaded contact performance, accurate lubricant data is crucial. The lubricant's high-pressure rheological behaviour is by far the least known parameter. However, this is the key factor to realistic modeling of non-Newtonian Elasto-Hydrodynamic lubrication.

In this study, a new approach is described to extract such data from optical interferometric film thickness measurements of EHL contacts. The approach is relatively straightforward and cheap compared to "out of contact" rheological experiments using specialized equipment. At the same time it is more reliable than earlier approaches presented in the literature.

### Reference:

Obtaining the pressure spike and maximum shear stress from optical interferometry data.  
N. Biboulet, P. Sperka, C.H. Venner, A.A. Lubrecht and I. Krupka  
Tribology International, Vol 62, 2013, p 1–7.