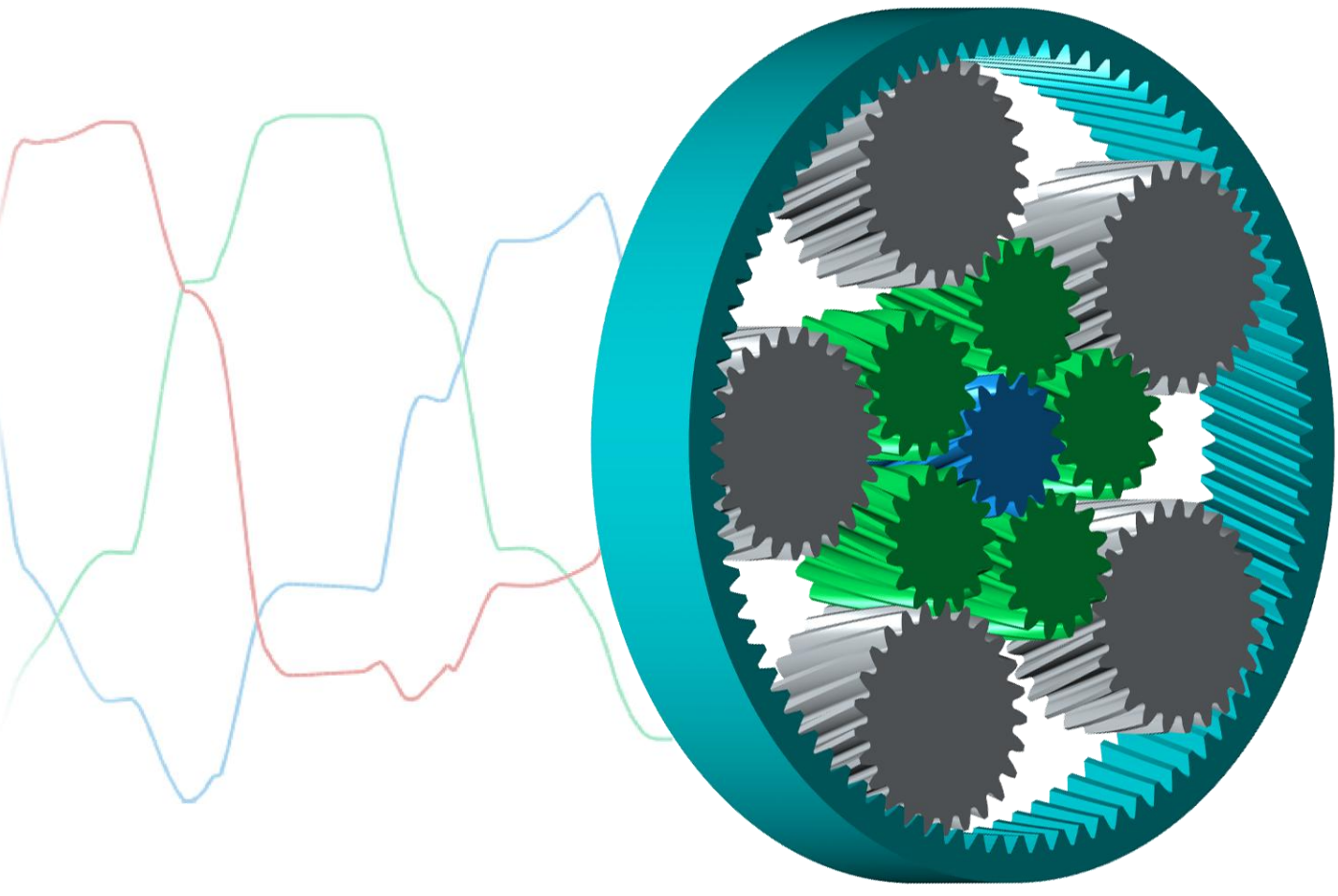
Total Gear Solutions Gleason

Advanced Training

Cylindrical Gears: Contact Analysis

2 Live Stream Sessions



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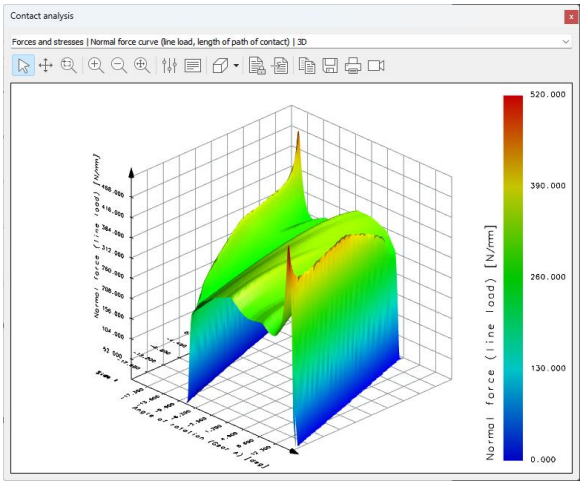
Sharing Knowledge

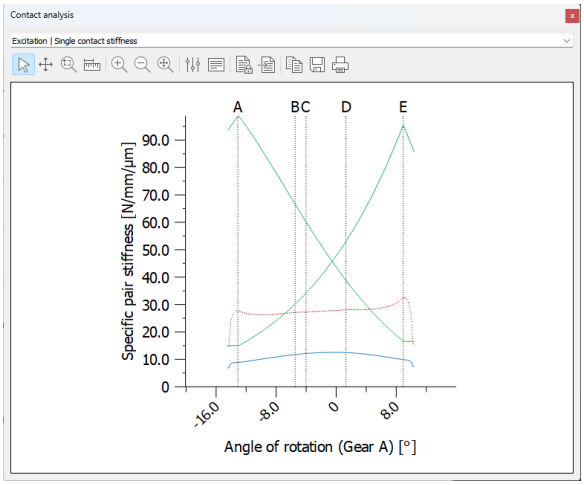
Session 1: Contact analysis, Part I

- Theory of contact stiffness calculation according to the Weber/Banaschek analytical method
- Definition of secant and tangent stiffness
- Explanation of the correction coefficient for Hertzian stiffness
- Approximation and effects of helical gear teeth
- Differences to the FE approach
- Importance and interpretation of the transmission error
- Effect of transverse contact ratio and overlap ratio on the transmission error
- Identification of entry and exit impact
- Meaning of change of normal angle at the beginning of the profile modification
- Defining profile and flank line modifications and their effects
- Contact analysis settings
- How to use iterative wear calculation

Session 2: Contact analysis, Part II

- Importance of the inclination/deviation error of axis
- Taking the shaft calculation into account
- Important settings in the shaft calculation
- Modification sizing
- Importance and interpretation of the progressions of normal force, stress and kinematics
- Defining the border weakening factor and its consequences on the buttressing effect
- Analytical model for planetary gear unit calculation
- Options and limits of planetary gear unit calculation
- Meaning and interpretation of planetary stage transmission error





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