

**Program of the 18th Arnold Tross Colloquium
at the 9th of June 2023**

Morning - moderation E.Kuhn

- 10:00** Welcome and opening .*Prof.Dr. E.Kuhn, HAW Hamburg*
- 10:10** Report on the progress of research work on selfoptimization in grease friction
. *Prof. Dr. E.Kuhn, HAW Hamburg*
- 10:20** Sustainable nanofibrillated cellulose-based oleogels: rheological and tribological behavior
. *(online):C. Roman,M.Sc., Prof. Dr. M. Á. Delgado, Prof. Dr. M. García-Pérez,*
. *Prof. Dr. S. D. Fernández-Silva, Prof. Dr. M. García-Morales, University of Huelva (Spain)*
- 10:40** Active control of friction in ball bearings using sustainable electro-rheological fluids
. *(online): S. D. Fernández-Silva, M.Sc., Prof.Dr. M. García-Morales,*
. *Prof. Dr. M. García-Pérez, C. Roman,M. Sc., Prof.Dr. M. Á. Delgado, University of Huelva*
- 11:00** Network Topics of Analytical Tribology in Contexts of Societal Challenges.
. *Dr. Dr.U. Gunst, Analytical Tribology Network (ATN) Münster*
- 11:20** Application of Graphene Platelets for Dry Lubrication
. *Dr. F. Pape, Prof. Dr. G. Poll Leibniz University Hannover*
- 11:40** Structural degradation of lubricating greases - Comparison of energetic analysis with
. optical observation.*L. Ahme, M.Sc., HAW Hamburg*

Time for Lunch 12:00 - 14:00

Afternoon - moderation Univ. Doz. H.v. Leeuwen (TU Eindhoven (Netherlands))

- 14:00** On a Non-Dimensional Formulation of Friction Hysteresis for Rough Lubricated Surfaces
. *K. Driesen^{1,2}M.Sc., Prof. Dr. Sylvie Castagne¹, Prof. Dr. Bert Lauwers¹, Prof. Dr. Dieter*
. *Fauconnier², ¹ Katholic University Leuven, ² Soete Laboratory, Ghent University (Belgium),*
- 14:20** Elucidating grease lubrication through CFD simulations of starved EHL contacts
. *S.Zhang, M.Sc, Prof. Dr.G.Jacobs, Dr.F.König, MSE, RWTH Aachen University*
- 14:40** An Insight into Carbonaceous Nanoadditives Effect on the properties of Synthetic and
. Green Greases
. *B. G. Nassef,M.Sc., Dr. M. G. A. Nassef, Dr. H. S. Hassan, Prof. Dr. G. A. Nassef,*
. *Dr. M. Soliman, Dr. M. F. Elkady, Leibniz UniversityHannover / Egypt-Japan University*
. *of Science and Technology, New Borg El-Arab City (Egypt)*
- 15:00** The Inlet Meniscus in Oscillating Grease Lubricated Rolling Element Bearings.
. *G. Bayer, M.Sc., Prof.Dr. G.Poll, Leibniz University Hannover*
- 15:20** Evaluating the water resistance and degradation properties of grease using the
. contact angle approach
. *(online): Dr. K.P. Lijesh, Prof. Dr. M.M.Khonsari, Louisiana State University (USA)*
- Closing the Collouium-** Prof. Dr. E.Kuhn
- 17:00** Dinner for Speaker in the Gasthaus an der Alster