

ARNOLD TROSS KOLLOQUIUM

Eine Veranstaltungsreihe des
Tribology Research Center (TREC)
Department für Maschinenbau und Produktion
Hochschule für Angewandte Wissenschaften Hamburg

17. ARNOLD TROSS KOLLOQUIUM



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Institut für Konstruktion und Produktentwicklung
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HAW Hamburg



Berichte aus dem Maschinenbau

Erik Kuhn (Hrsg.)

17. Arnold Tross Kolloquium

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PREFACE



The restored entrance hall of our department. The building comes from 1913.

This year was the first time that we organized a hybrid colloquium. But everything works well and we had contributions from Spain, Belgium, Netherlands and Germany.

It was a special pleasure for me to give Harry van Leeuwen the keynote and he opened our Colloquium with a report about the Tribology of the Low Lands in past, present and future.

One more time the conference was determined by an open and intensive discussion. The special atmosphere of a small meeting opened possibilities for individual talks and for immediatly reactions by the audience during the presentations.

In addition to topics such as friction hysteresis, wind turbines or electro-rheological fluids, the colloquium was characterized by several lectures on lubricating grease tribology. The research contributions from the University of Hannover accounted for a large proportion.

We welcomed authors and co-authors from institutions who participate the first time in Hamburg. That were KU Leuven (Ch. Driesen presented a very interesting paper) and Uni Münster. For the next year we hope again for an interesting and open exchange of ideas and a humbly contribution to the scientific discipline *Tribology*.

But an unburdend Colloquium can only take place if the aggression of Russia stops and people in Ukraine can live in freedom again.

Prof. Dr. E.Kuhn

PROGRAM OF THE 17TH ARNOLD TROSS COLLOQUIUM

10:30	<i>Prof.Dr. E.Kuhn (HAW Hamburg): welcome and opening</i>
10:40	<i>Univ.Do. H.v.Leeuwen (TU Eindhoven, (keynote-speaker))</i> <i>Winner of the Georg Sarton Medal awarded by the Uni Ghent 2022</i> Past, Present and Future of Tribology in the Low Countries.
11:10	<i>S. Fernandez,M.Sc.,Prof.Dr. Moises Garcia Morales,</i> <i>Prof.Dr. M.Delgado (Uni Huelva-online)</i> Electro-Rheology applied to control the lubrication process
11:30	<i>M.Borrego,M.Sc, Prof.Dr. J.E.Martin - Alfonso,</i> <i>Prof.Dr. J.M.Franco (Uni Huelva - online)</i> Tribological behavior of biolubricants based on nanofibers developed by electrospinning
11:50	<i>Dr.Dr. U.Gunst (ATN Münster)</i> Small and Micro Wind Power Plants - Aspects of Use and Analytical Tribology.
12:10	<i>Prof.Dr. E.Kuhn (HAW Hamburg)</i> Introduction of irreversibility in the study of lubricating greases
12:30-14:15 Lunch at the Mensa	
Poster exhibition in the lecture room parallel to the oral presentation	
<i>Dipl.-Ing. T.Rieling (HAW Hamburg): Greases Next Top Model</i> <i>-Horst Dieter Tscheuschner (Poster)</i> <i>Dr. F.Rühle, Prof.Dr. W.Lilienblum (Magdeburg): Is it Possible to Investigate Specific Parameters of Lubricated Friction Pairs with Model Tests? (Poster)</i> <i>L.Ahme,M.Sc. (HAW Hamburg): Change of Grease structure during friction process.(Poster)</i>	
Moderation: H.v.Leeuwen	
14::15	<i>K.Driesen,M.Sc. ^{1,2}, Prof.Dr. S. Castagne¹,</i> <i>Prof.Dr. D.Fauconnier², Prof.Dr. B.Lauwers¹</i> ¹ KU Leuven , ² UGent :
14::35	On Friction Hysteresis of Rough Lubricated Surfaces <i>S.Vafaei,M.Sc., Prof.Dr. G.Jacobs, Dr.F..König (RWTH Aachen):</i> Tribological Evaluation of Lubricating Greases Composed by Different Bio-based Polymer Thickeners
14:55	<i>I.Slabka, M.Sc., S. Henniger, B.Sc., David Küçükaya, B.Sc.,</i> <i>M.Dawoud,M.Sc, Prof.Dr.H.Schwarze (TU Clausthal):</i> Influence of Rheological Properties of Lithium Greases on Operating Behavior in Oscillating Rolling Bearings at a Small Swivel Angle.
15:15	<i>Dr. F.Pape¹, Dipl.-Phys. D.Mallach², Dr. D.Lipinsky²,</i> <i>Prof.Dr. H.F.Arlinghaus²,Prof.Dr. G.Poll¹</i> ¹ Leibniz Uni Hannover, ² Uni Münster
15:35	<i>Dr. N.Bader¹, Muyuan Liu,M.Sc², I.Slabka,M.Sc.²,</i> <i>Prof.Dr. H.Schwarze²Prof.Dr. G.Poll¹</i> ¹ Leibniz Uni Hannover, ² TU Clausthal
15:55	<i>S.Wandel,M.Sc., F.Bartling,M.Sc., Prof.Dr. G.Poll</i> <i>Leibniz Uni Hannover</i> The Role of the Cage for Track Replenishment in Oscillating Rolling Element Bearings
16:15	Closing of the Colloquium in the Tribo-Lab Dinner with speakers in <i>Gasthaus an der Alster</i> (17:00)