

2022 ROMAC ANNUAL MEETING AGENDA
IN-PERSON AND VIRTUAL
CHARLOTTESVILLE, VIRGINIA
JUNE 21 – 23, 2022



ENGINEERING

Department of Mechanical and
Aerospace Engineering
Rotating Machinery and Controls Laboratory

TUESDAY, JUNE 21

8:00 am		REGISTRATION CONTINENTAL BREAKFAST	
		WELCOME AND INTRODUCTION	SESSION CHAIR: TBD
8:30 am	Talk 1	ROMAC Overview Roger Fittro	
9:00 am	Talk 2	ROMAC Software Updates Neal Morgan	
9:45 am	Talk 3	Axial Subharmonic Resonance of a Screw Compressor C. Hunter Cloud, BRG Machinery Consulting	
10:15 am		BREAK	
		FLUID FILM BEARINGS	SESSION CHAIR: TBD
10:45 am	Talk 4	Bearing Research Overview Roger Fittro	
11:15 am	Talk 5	MAXBRG+ Updates and Future Development Plans Cori Watson-Kassa	
11:45 am	Talk 6	Thrust+ Updates and Future Development Plans Cori Watson-Kassa	
12:15 pm		LUNCH	
		SEALS	SESSION CHAIR: TBD
1:15 pm	Talk 7	Seal Research Overview Neal Morgan	
1:45 pm	Talk 8	AnnularSeal Updates and Future Development Plans Cori Watson-Kassa	
2:15 pm	Talk 9	AnnularSeal - Industrial Verification Examples TBD	
2:45 pm		BREAK	
		BEARINGS & SEALS	SESSION CHAIR: TBD
3:15 pm	Talk 10	AnnularSeal Code Case Study - Loss Coefficient Study: Model Results vs. CFD Experiment Neal Morgan	
3:45 pm	Talk 11	ROMAC Code Case Study - MAXBRG+ Validation with Reduced Oil Flow Stability Test Rig Data Zihao Huang	
4:15 pm	Talk 12	ROMAC Code Case Study - MAXBRG+ Validation with Direct Lubrication Experimental Results Pedro Herrera	
6:00 pm		ROMAC HOSTED RECEPTION AND DINNER	

WEDNESDAY, JUNE 22		
8:00 am		CONTINENTAL BREAKFAST
		SEALS SESSION CHAIR: TBD
8:30 am	Talk 13	ROMAC Code Case Study - AnnularSeal Sensitivity to Groove Loss Factor Nathaniel Gibbons
9:00 am	Talk 14	Axial-Radial Numerical Modeling of Annular Seals by a Mimetic Finite Difference Method Neal Morgan
9:30 am	Talk 15	Seal Test Rig Update and Testing Plan Cori Watson-Kassa and Nathaniel Gibbons
10:00 am		BREAK
		FLUID FILM BEARINGS & ROTORDYNAMICS SESSION CHAIR: TBD
10:30 am	Talk 16	ROMAC Code Case Study - THRUST+ validation with CFD and Experimental Data Xin Deng
11:00 am	Talk 17	ROMAC Code Case Study - THRUST+ Validation with Glavatskikh Experimental Results Neal Morgan
11:30 am	Talk 18	Fluid-Film Bearing Test Rig Torsional Analysis Pedro Herrera
12:00 pm		LUNCH
		SEALS SESSION CHAIR: TBD
1:00 pm	Talk 19	Circumferentially Grooved Seal Flow Field Analysis Based on Effective Film Thickness to Improve Bulk Flow Models Nathaniel Gibbons
1:30 pm	Talk 20	Circumferentially Grooved Seal Flow Field Analysis Based on Effective Film Thickness to Improve Bulk Flow Cori Watson-Kassa
2:00 pm	Talk 21	Quasi-Steady CFD Method for Circumferentially Grooved Seal Rotordynamic Coefficient Prediction: A Sensitivity Study Nathaniel Gibbons
2:30 pm		BREAK
		BEARINGS & TEST RIGS SESSION CHAIR: TBD
3:00 pm	Talk 22	Fluid-Film Bearing Test Rig Update Pedro Herrera
3:30 pm	Talk 23	Honeywell AMB Test Rig Development and Experimental Validation Roger Fittro
4:00 pm	Talk 24	Numerical and Experimental Analysis of Loaded Pad Starvation and Supply Oil Distribution in a Tilting Pad Journal Bearing Cori Watson-Kassa
4:30 pm	Talk 25	Computational Modeling and Analysis of Tilting-Pad Journal Bearings Zihao Huang
		DINNER ON YOUR OWN

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THURSDAY, JUNE 23		
8:00 am		CONTINENTAL BREAKFAST
		SQUEEZE FILM DAMPERS SESSION CHAIR: TBD
8:30 am	Talk 26	New ROMAC SFD Code Development Cori Watson-Kassa
9:00 am	Talk 27	CFD Modeling of Centrifugal and Convective Inertia in Squeeze Film Dampers Kangyi Peng and Roger Fittro
9:30 am	Talk 28	CFD Modeling of Squeeze Film Dampers Under Reduced Oil Supply Presenter: Cori Watson-Kassa Researcher: Greg Breza
10:00 am		BREAK
		FLUID-FILM BEARINGS
10:30 am	Talk 29	Understanding the Mechanism of Load Capacity in Centrally Pivoted Thrust Bearings Cori Watson-Kassa
11:00 am	Talk 30	Computational Modeling and Analysis of Laminar, Transitional & Turbulent Flow in Thrust Bearings Xin Deng
11:30 am	Talk 31	CFD Modeling of Thermal Impacts on Bearing Jacking Pockets Presenter: Cori Watson-Kassa Researcher: Kevin Moccia
12:00 pm		LUNCH
		FLUIDS & CODE DEVELOPMENT PLANS SESSION CHAIR: TBD
1:00 pm	Talk 32	Assessing High Fidelity Multi-Component Models to Facilitate Safeguards at GCEPs Presenter: Houston Wood Researcher: Wisher Paudel
1:30 pm	Talk 33	ROMAC Code Future Development Plan Discussion Roger Fittro
2:00 pm		BREAK
2:30 pm		Wrap-up Session

The schedule, talks and presenters are subject to change.