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## 20th Annual Midwestern Universities Fluid Mechanics Retreat April 1, 2 and 3, 1993 Geneva Center, Rochester, Indiana

#### **PROGRAM**

Thursday, April 1 6:00 PM to 11:00 PM

Check-in and Welcoming Party

Friday, April 2
7:30 AM
8:30 AM
8:40 AM
10:00 AM
10:20 AM
12:00 Noon
1:30 PM
3:10 PM
5:30 PM
6:30 PM

8:15 PM to ??

Breakfast
Introductory Remarks
Session I
Coffee Break
Session II
Lunch
Session III
R and R
Dinner
Session IV
Social Gathering at Redwood Lodge

Saturday, April 3 7:30 AM 8:30 AM 9:50 AM 10:10 AM 12:00 noon

Breakfast Session V Coffee Break Session VI Lunch

Each speaker will be allowed exactly 15 minutes to communicate uninterrupted. A five-minute discussion period will follow. We encourage further discussion at another time during the retreat. FROGs are awarded in the MUFMECH tradition for the following infractions.

- Speaker exceeds the 15 minutes allocated for speaking (1 FROG for each minute)
- Speaker or questioner exceeds the five minutes allocated for discussion
- Participants interrupt the speaker
- Participants refer to other participants using a title; such as, Professor, Doctor, Student, Your Excellency, etc.
- Participants mention the names of funding agencies; such as, the Michigan Department of Fish Science and Technology
- Participants arrive late for a session
- · Any other infraction deemed worthy by the KOTGOF

Session Chairpersons are responsible for starting the sessions on time and maintaining the schedule. The KOTGOF (Keeper of Time and Giver of FROGs) for each session is responsible for awarding FROGs according to the rules stated. Participants awarded FROGs must redeem them by contributing \$1.00 per FROG to the refreshment fund.

# Session I (Friday Morning April 2)

8:30 (Sharp!) Opening Ceremonies...The torch will be lit by a thrown javelin, etc.

Chairperson: Mike Foster KOTGOF: Dave Williams

Talk	Time	Speaker(s)	School	Title
1	8:40	Giles Brereton	U of M	Particle Removal by Focused Ultrasound
2	9:00	Brian Saunders Matt Frank Sangtae Kim Frank Traenkle Mary Vernon	U of W	Parallel Computational Strategies for Elliptic PDEs
3	9:20	Zhenhua Xiao Eric Adams	The OSU	Interactive Time-Adaptive Gridding for Boundary Layer Type Equations
4	9:40	Sheryl Patrick Hafiz Atassi	Notre Dame	Acoustic Radiation from an Airfoil in Nonuniform Subsonic Flows
10	0:00		COFFE	E BREAK

# Session II (Friday Morning, April 2)

Chairperson: Charles Petty KOTGOF: Files Brereton

Talk	Time	Speaker(s)	School	Title
5	10:20	Millard Johnson	U of W	On Boundary Conditions for Lubrication Theory
6	10:40	John Kiedaisch	IIT	Interaction of a Missile Tip Vortex with a Fin
7	11:00	Kevin Draper Mike Foster	The OSU	Instability of Large Flow Force for Long's Vortices
8	11:20	Syed Ali M. Koochesfahani John Foss	MSU	Estimates of Strouhal Number in a Naturally Excited Two- Dimensional Slit-Jet Flow Field
9	11:40	Steven Schneider	Purdue	Out of My Life and Times with the Ludwig Probe
12	:00		LU	INCH

Reg Receipts
Jake Cash return as regd
before Session III (Friday Afternoon, April 2)

Chairperson: Field Marshal Dave Malkus KOTGOF: Bob Johnson

Talk	Time	Speaker(s)	School	Title
10	1:30	Arne Pearlstein	U of I	The Extraction of 2D and 3D Incompressible Velocity Fields from the Measurement of 1 or 2 Passive Scalars
11	1:50	Mandana Kompani Dave Venerus Barry Bernstein	IIT	Mathematical Modeling of Lubricated Squeezing Flow
12	2:10	Woong-Chul Choi Yann Guezennec	The OSU	In-Situ Calibration of 3-D Particle Image Velocimetry Technique
13	2:30	Daniel Klingenberg	U of W	Relaxation in Electro- rheological Suspensions
14	2:50	Mohammed Gad-el-Hak	Notre Dame	Interactive Control of Turbulent Flows: A Futuristic View
3	:10	R and R		
5	:30	DINNER		

# Session IV (Friday Evening, April 2)

Chairperson: Joe Powers KOTGOF: Bob Kolkka

Talk	Time	Speaker(s)	School	Title
15	6:30	Bob Brodkey Seung Joo Haam	The OSU	Index of Refraction Matched Technique for the Study of High Concentration Systems
16	6:50	Jisheng Fang Hafiz Atassi	Notre Dame	Direct Sound Calculation from Cascade in Nonuniform Flows
17	7:10	Hussein Mansy	IIT	Quantitative Measurements of Spanwise Periodic 3D Waves in the Near-wake of a Cylinder at Low Reynolds Number
18	7:30	Chuck Gendrich	MSU	When does Dynamic Stall Begin?
19	7:50	Bill Schultz	U of M	Standing Waves
8:	:15		SOCIAL O	SATHERING

Clean cups/papers, etc. @ ens -7 session

Session V (Saturday Morning, April 3)

Chairperson: Candace Wark KOTGOF: Scott Stewart

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Talk	Time	Speaker(s)	School	Title
20	8:30	Charles Petty K. (Jay) Jayaraman Chilukuri Satyadev	MSU	Stability of Reactive Filling in Resin Transfer Molding
(21	8:50	Scott Jones	U of I	On the Chaotic Motion of Solids Through a Liquid
22	9:10	Tom Corke Mahmood Ghassemi	IIT	Secondary Growth of 3-D Modes in Far-Wakes through Tuned and Detuned Subharmonic Resonance
23	9:30	Bob Kolkka Krishna Venkatasubba	MTU	Linear Stability Analysis of Plane Poiseuille Flow of the Johnson Segalman Fluid
9:	:50		COFFE	E BREAK

### Session VI (Saturday Morning, April 3)

Chairperson: Bob Nerem KOTGOF: Giles Brereton

Talk	Time	Speaker(s)	School	Title	
24	10:10	Dave Malkus	U of W	Stability of Step Shear Flows of Viscoelastic Liquids	
25	10:30	Quan Qi	U of I	Compressibility Effects on Acoustic Streaming Near a Rigid Plane Boundary	
26	10:50	Sergey Suslov Oleg Vasilyev Samuel Paolucci	Notre Dame	Thermo-Convective Instability in a Tall Vertical Cavity	
27	11:10	Faith Morrison	MTU	Experiments in Melt Fracture: Work in Progress	
28	11:30	Kuldeep Prasad	U of I	Acoustic Pressure Perturbation Interactions with Laminar Flames	
11	:50	CLOSING REMARKS			
12	:00	LUNCH			

Clarify - Frogs a Social Fund