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To: MUFMECH.94@neumann.ame.nd.edu  
Subject: Draft Program/final details

TO: 1994 MUFMECH Participants

FROM: Joe Powers

RE: Details

DATE: April 5, 1994

This memo is to provide some details about this year's MUFMECH retreat. Included are several items from the Geneva Center Policy Statement.

Fees: Cabin--\$57.00; Lodge--\$73.00. We prefer payment in the form of checks made out to the "Geneva Center". We cannot handle credit cards. Payment is to be made upon registration Thursday evening at which time cabin and room assignments will be made. These fees cover lodging and meals from Friday's breakfast through Saturday's lunch.

Facilities: Lodge--bedding, towel, and washcloth provided.  
Cabin--bring your own bedding washcloth and towel

Sports: Volleyballs, soccer balls, basketballs, and ping-pong available

#### Geneva Center Regulations

1. If necessary, groups will be charged for any damages to the Geneva Center's property, furnishings, or equipment.
2. Smoking is not permitted anywhere in the building. Smoking is only permitted outside in the vicinity of the main building, on the cabin porches, or on the porch of the Redwood Lodge.
3. Shirt and shoes are to be worn in the Dining Room at all times.
4. No food is to be brought in by individuals using the facility. A variety of snacks will be arranged through the kitchen and picnic supplies will be provided for the Friday night festivities.

#### Other items

- We are FULL, so please don't bring more people than we know about
- Because of the large number of people in cabins, we have been able to lower the cost for that option
- I will fax a map to Geneva Center very soon
- Let me know if any schedule changes are required
- Full programs will be available at the meeting

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21st Annual Midwestern Universities Fluid Mechanics Retreat  
April 14, 15, and 16, 1994  
Geneva Center, Rochester, Indiana

Program

Thursday, April 14

6:00 PM to 11:00 PM

Check-in and Welcoming Party

Friday, April 2

7:30 AM

Breakfast

8:30 AM

Introductory Remarks

8:40 AM

Session I

10:00 AM

Coffee Break

10:20 AM

Session II

12:00 Noon

Lunch

1:30 PM

Session III

3:10 PM

R and R

5:30 PM

Dinner

6:30 PM

Session IV

8:15 PM--

Social Gathering at Redwood

Lodge

Saturday, April 3

7:30 AM

Breakfast

8:30 AM

Session V

9:50 AM

Coffee Break

10:10 AM

Session IV

12:00 Noon

Lunch

Each speaker will be allowed exactly fifteen minutes to communicate uninterrupted. A five-minute discussion period will follow. FROG's are awarded in the MUFMECH tradition for the following infractions:

-Speaker exceeds the fifteen minutes allocated for speaking (1 FROG/minute)

-Speaker or questioner exceeds the five minutes allocated for discussion

-Participants interrupt the speaker

-Participants refer to other participants using a title or indicator of status 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 inappropriate by the Keeper of Time and Giver of Frogs (KOTGOF)

*Participants miss a session (2)*

Session Chairpersons are responsible for starting the sessions on time and maintaining the schedule. The KOTGOF for each session is responsible for awarding FROG's according to the rules stated. Participants awarded FROG's must redeem them by contributing \$1.00/FROG to the refreshment fund.

*or understood by those who are in the know.*

Below is an update of the number of talks and housing plans.

School	# talks requested/allocated	# in lodge	# in cabin	#sing
OSU	6/3	12 M	3 M	0
Purdue	0/0	0	0	0
Minnesota	1/1	2 M/ 2 F	0	0
IIT	7/4	5 M	22 M	0
Northwestern	3/2	0	5 M	0
Western Mich.	4/2	0	4 M	1 M
Ill.-Chicago	1/1	2 M	0	0
Notre Dame	6/3	8 M/ 2 F	2 M	0
Ill.-Urbana	4/4	13 M	4 M	1 M
Michigan	5/3	9 M	0	0
Mich. State	3/2	2 F	6 M	0

Mich. Tech.	1/1	0	11 M/ 4 F	0
Wisconsin	2/2	1 M/ 1 F	1 M	0
TOTALS	42/28	59	62	2

TOTAL NUMBER ATTENDEES--123 (We are FULL)

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 Session I (Friday Morning, April 15)

Chairperson: Giles Brereton

KOTGOF: Candace Wark

Talk	Time	Speaker	School
1	8:40	Orangi, S.	Ohio State
2	9:00	Zhao, X.	Notre Dame
3	9:20	Rose, T.	Wisconsin
4	9:40	Turnbull, P.	Michigan

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 10:00 COFFEE BREAK

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 Session II (Friday Morning, April 15)

Chairperson: Hafiz Atassi

KOTGOF: Terry Conlisk

Talk	Time	Speaker	School
5	10:20	Robichaux	Illinois-Urbana
6	10:40	Atassi, O.	Northwestern
7	11:00	Naguib, A.	IIT
8	11:20	Komrzy	Ohio State
9	11:40	Merati	Western Michigan

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 12:00 LUNCH

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 Session III (Friday Afternoon, April 15)

Chairperson: Bob Kolkka

KOTGOF: Bill Schultz

Talk	Time	Speaker	School
10	1:30	Aslam, T.	Illinois-Urbana
11	1:50	Carhart, R.	Illinois-Chicago
12	2:10	Schultz, B.	Michigan
13	2:30	Golubev, V.	Notre Dame
14	2:50	Zhuang, M.	Michigan State

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 3:10 R AND R

5:30 DINNER

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 Session IV (Friday Evening, April 15)

Chairperson: John Foss

KOTGOF: Al Szewczyk

Talk	Time	Speaker	School
15	6:30	Soell, J.	Ohio State
16	6:50	Maul, C.	Wisconsin
17	7:10	Thyageswaran	IIT
18	7:30	Freeberg, P.	Minnesota
19	7:50	Mittal, R.	Illinois-Urbana

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 8:15 SOCIAL GATHERING

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 Session V (Saturday Morning, April 16)

Chairperson: Seth Lichter

KOTGOF: Scott Stewart

Talk	Time	Speaker	School
20	8:30	Bohl, D.	Michigan State
21	8:50	Sahin, I.	Western Michigan
22	9:10	Akhavan, F.	Michigan
23	9:30	Knasiak, K.	IIT

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9:50 COFFEE BREAK  
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Session VI (Saturday Morning, April 16)

Chairperson: Amy Alving

KOTGOF: Bob Brodkey

Talk	Time	Speaker	School
24	10:10	Taeibi-Rahni	Illinois-Urbana
25	10:30	Anderson, E.	Notre Dame
26	10:50	Kolkka, B.	Michigan Tech.
27	11:10	Cardell, G.	IIT
28	11:30	Lueptow, R.	Northwestern

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11:50 CLOSING REMARKS

12:00 LUNCH  
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TITLES  
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UNIVERSITY OF MINNESOTA

"Riblets on Sails: Their Effect on Lift and Drag"

Phil Freeberg and Amy Alving  
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THE OHIO STATE UNIVERSITY

1. Bin Lu and Jacques L. Zakin PRIO. 4 CUT

"Unsteady State Flow Birefringence Studies on

Cationic Surfactant Systems"

2. Petr Komrzy, Bin Lu, Jaroslav Pollert, and Jacques L. Zakin PRIO. 1

"Reduction of Drag and Heat Transfer in

Turbulent Flow of Cationic Surfactant Solutions"

3. Eric Adams, Zhenhua Xiao, and Terry Conlisk PRIO. 2 CUT  
"Adaptive-grid methods for unsteady

boundary-layer problems"

4. Julian R. Soell and Terry Conlisk PRIO. 5

"Vortex-Surface Collisions"

5. Saeed Orangi and M. Foster PRIO. 3  
"Structure of Compressible Three-Dimensional

Vortices"

6. Robert Leiweke and M. Foster PRIO. 6 CUT

"Interaction of an Atmospheric Vortex with

Topography"

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UNIVERSITY OF NOTRE DAME

--Priority NOT specified--

Effect of Asymmetries on Heat Transfer in a Bifurcating Channel  
X. Zhao, S. Paolucci, M. Sen and K. T. Yang

Is self-preservation ever achieved in a turbulent boundary layer?  
Mohamed Gad-el-Hak (FRIDAY AFTERNOON PREFERENCE) CUT

Stability of Mixed Convection Flow in a Tall Vertical Enclosure Under  
Non-Boussinesq Conditions  
Sergey A. Suslov and Samuel Paolucci CUT

An Inverse Problem in Unsteady Aerodynamics and Acoustics  
Sheryl M. Patrick and Hafiz M. Atassi CUT

Aerodynamics and Acoustics of Unsteady Swirling Flows in a Duct  
Vladimir V. Golubev and Hafiz M. Atassi

The Effect of Shear Mean Flow on Straight and Tapered Circular  
Cylinders  
Elgin Anderson (presenter) and Albin A. Szewczyk

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ILLINOIS INSTITUTE OF TECHNOLOGY

The talks in order of priority are.

Greg Cardell

"The formation of secondary vortices in the wake of a circular  
cylinder"

Sridhar Thyageswaran

"CFD Modelling of Heat Transfer in the Tail Pipe of  
Pulse Combusters"

Keith Knasiak

"Effect of Periodic Distributed Roughness on Cross-Flow  
Instability"

Ahmed Naguib

"Extracting Wall-Pressure Time Series Using Optimal Filtering"

Stefan Gruker CUT

"Effect of Adverse Pressure Gradients on Subharmonic Resonance  
in Boundary Layers"

Tom Corke CUT

"Mode Detuning in Subharmonic Resonance in Boundary Layers"

Dave Cavalieri CUT

"Glow Discharge Actuators for Supersonic Flow Instabilities"

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NORTHWESTERN UNIVERSITY

--Priority NOT specified--

"The roll-up of a wall bounded shear layer," Oliver Atassi (FRIDAY MORN.)

"Spatio-Temporal Development of Turbulent Wall Pressure Events," Rich

Lueptow

"Contact line motion and the electrical double layer," Yeong-Yan Perng CUT

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WESTERN MICHIGAN UNIVERSITY

--Priority NOT specified--

1) PIV in Rotating Flow

Parviz Merati

2) Flow Due to a Moving Pressure Distribution in a Finite-Depth Fluid

Iskender Sahin (SATURDAY MORNING PREFERRED)

3) High-Frequency Unsteady Flows in Three Dimensional Blade Rows

Daniel Dorney CUT

4) Thin Film Heat Flux Gage

Christopher Cho CUT

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UNIVERSITY OF ILLINOIS AT CHICAGO

"Some thoughts on turbulent buoyant jets" by R. A. Carhart and J. Rabchuk,  
Physics Department FRIDAY PREFERENCE

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PURDUE UNIVERSITY

Investigation of an Energy-Method Code for Computing Equilibrium Interfaces in the Liquid Helium Tank of the Gravity Probe-B Spacecraft: 1-g Experiments and Modeling.

Steven Collicott, Robert Bayt, and Scott Courtney --CUT--

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UNIVERSITY OF MICHIGAN

(priority order)

1. "Fluid/Structure Interaction in Paper Formation", Paul Turnbull

2. "Can fish swim straight?", Bill Schultz

3. "Dynamics of Free-Surface Turbulence", F. Akhavan

4. "Electrical and Mechanical Transients in E-R Fluids" S. Ceccio  
CUT

5. "Spacing of streaks in steady, unsteady, bounded and unbounded flow",

Giles

Brereton CUT

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MICHIGAN STATE UNIVERSITY

--priority NOT specified--

DOUG BOHL "AN INVESTIGATION OF TIME RESOLVED STREAMWISE VORTICITY  
IN A TABBED JET"

MEI ZHUANG "INSTABILITY OF WAKE-DOMINATED COMPRESSIBLE MIXING  
FLOWS"

JOHN FOSS "SOME OF THE THINGS WE KNOW ABOUT THE TRANSVERSE  
VORTICITY  
FIELD IN A TWO\_STREAM MIXING LAYER"---CUT---(per JF)

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UNIVERSITY OF ILLINOIS-URBANA

--priority NOT specified--

Parallel Spectral Multidomain Navier Stokes Simulations on the CM-5  
Joseph Robichaux

Department of Mechanical Engineering UIUC

Vortex Structures in the Symmetric and Asymmetric Wake  
of an Elliptic Cylinder

R. Mittal and S. Balachandar  
Dept. of Theoretical and Applied Mechanics  
Univ. of Illinois at Urbana-Champaign

SIMULATIONS OF BUBBLY FREE SHEAR FLOWS  
Mohammad Taeibi-Rahni  
Aeronautical/Astronautical Engineering Department,  
University of Illinois

Level set techniques for modeling detonation dynamics  
Tariq Aslam  
Theoretical and Applied Mechanics  
UIUC

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UNIVERSITY OF WISCONSIN-MADISON

The presentations in order of priority are:  
(FRIDAY PREFERENCE FOR BOTH)  
\* (presenter)

1. "Traction Singularities on Sharp Corners and Edges in Three-  
Dimensional Stokes Flow."  
  
by: Peyman Pakdel and Christine Maul\*  
Department of Chemical Engineering
2. "Analysis of Piston Ring Lubrication Theory with Large Surface  
Tension."  
  
by: Millard W. Johnson, Jr. and Todd R. Rose\*  
Department of Engineering Mechanics and Astronautics  
and the Engine Research Center

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MICHIGAN TECHNOLOGICAL UNIVERSITY

"Some Ubiquitous Features of Differential and Single Integral  
Viscoelastic Constitutive Equations "

. . Bob Kolkka, MTU, and Dave Malkus, UWM

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