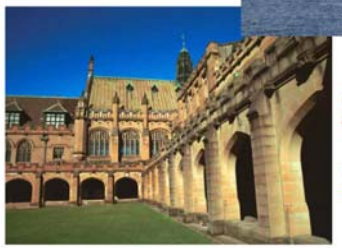
The current summary of Database

Makoto OHTA, IFS

National Institute of Applied Sciences of Lyon
FRANCE

Octobre 2005

Collaboration with Australia



Masud Behnia
Dean of Graduate Studies
The University of Sydney

ROYAL INSTITUTE OF TECHNOLOGY

Activities at KTH Mechanics

aiming to cooperate within the IFS Liasion Office

Fredrik Lundell, KTH Mechanics

TOHOKU UNIVERSITY

2nd International Conference on Flow Dynamics

Liaison Office Panel Session
"Multi-Lateral Research Initiative"

Summary

Toshiyuki Takagi, IFS, Tohoku University

November 17, 2005, Sendai International Center, Sendai Japan

UNIVERSITY OF NEW SOUTH WALES, (UNSW)

Sections of UNSW relevant to COE

Faculty of Engineering, Kensington, Sydney
- **School of Mechanical Engineering***
- School of Electrical Engineering
- School of Chemical Engineering
- School of Bio-medical Engineering

Faculty of Science, Kensington, Sydney
- School of Material Science & Engineering

Australian Defence Force Academy, Canberra
- **School of Mechanical Engineering***

*** Some proposals identified**

Liaison Office Panel Session
"Multi-Lateral Research Initiative"

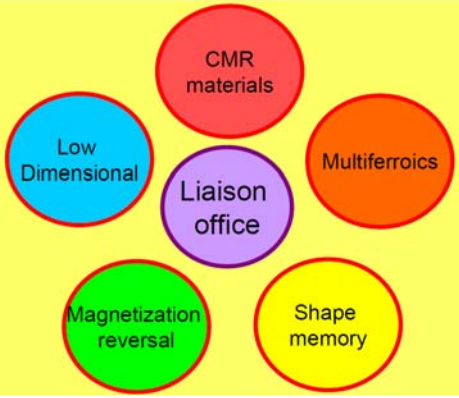
Tohoku University

Prof. S. Maruyama

contents

1. Activities of Tohoku University for international collaborations
2. Activities of Institute of Fluid Science for international collaborations
3. Research activities in Institute of Fluid Science
4. Establishment of International consortium of interface fluid dynamics applied to advanced-nanotechnology among leading institute and plan
5. Candidate topics for multi-lateral research through liaison office

Moscow State University



Suggested Collaborative Research Projects

Syracuse University
Syracuse, New York

Reported by H. Higuchi
hhiguchi@syr.edu
Syracuse University
College of Engineering and Computer Sciences

TOHOKU UNIVERSITY

2nd International Conference on Flow Dynamics

Liaison Office Panel Session
"Multi-Lateral Research Initiative"

Introductory Remarks

Toshiyuki Takagi, IFS, Tohoku University

November 17, 2005, Sendai International Center, Sendai Japan

http://www.ifs.tohoku.ac.jp/21coe/liaison_office_meeting/index.htm

Liaison Office Panel Session 2006 in Matsushima

KTH COE2006_Lundell.pdf

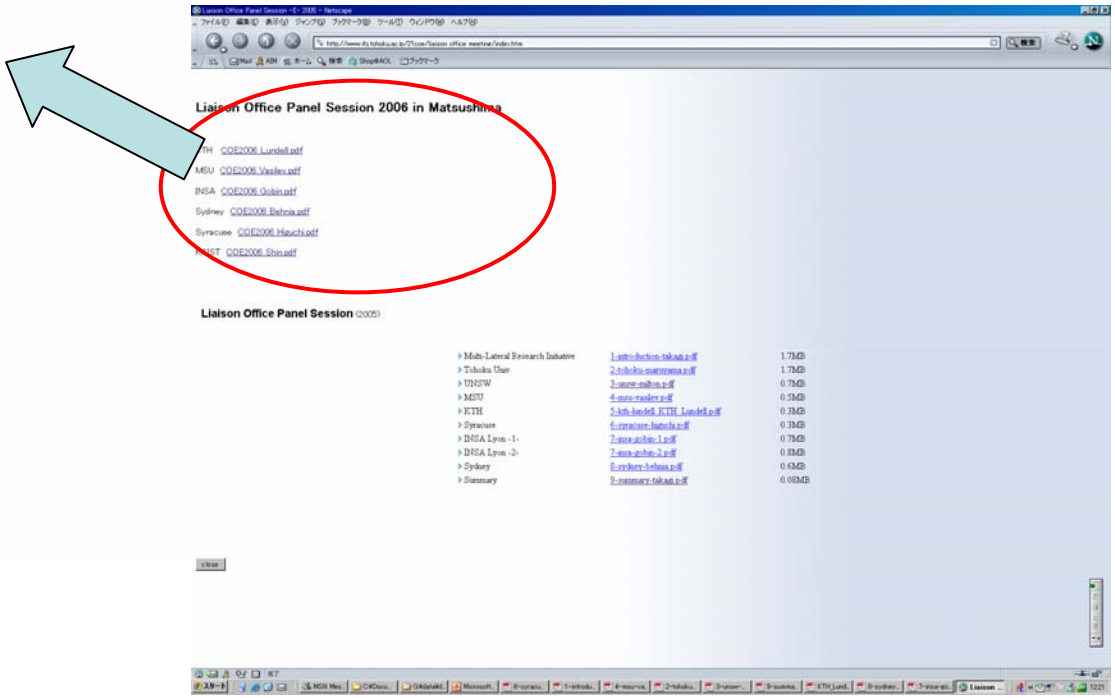
MSU COE2006_Vasilev.pdf

INSA COE2006_Gobin.pdf

Sydney COE2006_Behnia.pdf

Syracuse COE2006_Higuchi.pdf

KAIST COE2006_Shin.pdf



Moscow state University
CMR (Colossal magnetoresistive) materials
Multiferroics
Low dimensional
Magnetization reversal
shape memory alloys
$Ca(Cu_xMn_{3-x})Mn_4O_{12}$
$GdFe_3(BO_3)_4$
Ni-Mn-Ga
$Ni(HCOO)_2 \cdot 2H_2O$
Low dimensional magnetism
$NaTiSi_2O_6$
Curle-Welss curve
Bonner-Fisher curve
spin-singlet pair

Syracuse University
Active Feedback Flow Control
Bio Fluid Dynamics
Airfoil
Hydrofoil
Jet noise
Anechoic chamber
aero vehicle
sensor fusion
eloctronic communications
intelligent systems
biofilm
flagellar
biomedical device
free-swimming cells
biofilm drug
bacteria

chemoattractant
venticular shunt
knee joint
breathing
cough
air quality modeling
nucleation
diesel
PCB
nuclear waste

INSA-Lyon
nanocomposite
bio-compatible
bioactive
bone replacement
environmental microscopy
colloid
3D TEM
monitor
FEM
spark plasma sintering
tomograph
shared-time SIMS
intellignet materials system
artificial muscle
multifunctional sensor
system maintenance
security
durability
defectology
functional surface
extreme conditions
artificial bone
bio-inspired artifact
hybrid composite

shape memory alloy
piezo-sensor
optic fiber
wireless sensors
pulsed eddy current
vibtsyion reducing
heterogeneous materials
noise control
smart board
friction and wear
IPN polymer (PEO/PC)
ECP (PEDOT)
adhesion
high coupling coefficient
bandwith
AWT (Autonomous wireless transmitter)
SSH (synchroized switch harvesting)
electron beam irradiation
CFRP
GFRP
monte-carlo
molecular dynamics
fracture mechanics
thin polymers films
artificial prosthesis
metal-doped
DLC

Univ. Sydney
thermo-fluids
combustion
spray
emissions
turbulent
fluid dynamics
aerospace
stability
control
DSMC
evolutionary optimisation
rheology
biomedical
mechatronics
materials
autonomous vehicle

manufacture
vehicle design
heat transfer
tower
electronics
laputa project
isoflux
isothermal
DNS
boundary layer stability
nutrient transport
artificial upwelling
deep ocean water
buoyant plume
stratified environment
cross-flow
rapid diffusion
air flow

UNSW
rayleigh mode
liquid jets
rarefied flow
high Knudesen Number
Generalised Hydrodynamic equeations
rocket plume analysis
hypersonic facility
shock wave
supersonic wind tunnel test
scramjet combustion
supersonic liquid jet
energy system
diesel
vehicle
greenhouse
buoyancy-induced
double-skin façade
air flow
photovoltaic-thermal
thermo-fluid dynamics
forcing frequency
synthetic jet actuators

micro channel
blast wave attenuation
porous media
unmanned aerial vehicles]
UAVs
hardware-in-the-loop sytem
micro aerial vehicle
low Reynolds number
MAV
flapping

KTH
turbulence
turbulence modelling
flow control
optimal control
global modes
rotating pipe
transition
free stream turbulence
DNS
flat plate
asymptotic suction boundary layer
experimental Couette flow
flow of fibre suspensions
fluid physics of papermaking
swirling jet
separation
wake instability (exp+theor)
NMR flow measurements
rarefied gas dynamics
flow stability
stratified turbulence
LES
gas dynamics of internal combustion engines
high speed stereo-PIV

IFS
turbulent combustion
supersonic combustion
cryogenic
cavitation
hydrogen energy
two-phase
active control
microgravity
radiative heat transfer
thermo-electric actuator
micro-scale heat transfer and combustion
plasma flow
MR flow
micro-structure and complex interactions
intelligent material and fluid system
structural sytem
microair vehicle
measurement-integrated analysis
biofluid system
micro-biofluids
computational fluid dynamics

computational fluid dynamics
evolutionalry computation
aircraft
multidisciplinary design optimization
visual data mining
multiphase flow
CVD diamond
diamond-like carbon
advanced electromagnetic sensor
non-destructive evaluation
aritificial muscles
functional materials
rarefied gas dynamics
plasma physics
processing plasmas
gas flows
molecular scle energy transfer
micro/nano scale transport phenomena
micro/nano fluidics
nano-process ULSI etching

cleaning
thin-film deposition
plasma etching
neutral beam
on-wafer monitoring
advanced process control
APC
cavitation phenomena
gas-liquid two-phase flow
compressible turbulent flow
computational aeroacoustics
turbulent flow
fluid phenomena
shock waves
helicpters
optimum aerodynamic treatment
aircraft
trains
cars
complex fluids
slow dynamics
compulex systems

shock waves in gases, liquid and solids
application of shock waves
visual data mining
differential topology
taxonomic design
visualization applications
multimodality
parallelism
unification
functional biomodelling
cerebral aneurysm
blood flow
endovascular treatment
intracranial stent
interface
dssociative adsorption
catalyst
fuel cell
proton trancsport
membrane

Summary

The panel session was held and the presentation was opened to see and seek research partners.

The key words are extracted from the files of the session.

The key words are listed in an excel file to see it easily.

The key words will be connected to responsible partners.

The excel file will be opened in the web site.