

LIST OF ACCEPTED PAPERS

1. E4

ON THE SOLUTION OF CONSERVATION EQUATIONS IN CAVITATED
HYDRAULIC PIPELINES

M. Beck, H. Iben, U. Iben, N. Mittwollen, C.-D. Munz

BOSCH GmbH

Germany

2. E5

BOUNDARY LAYERS ON SPINNING FIBERS

Robert Kickingger and Philipp Gittler

Johannes Kepler University

Austria

3. E11

AN EXTENSION OF THE PRECONDITIONED ADVECTION UPSTREAM SPLITTING METHO
TWO-PHASE FLOWS FOR THE 3D CALCULATION OF CIRCULATING FLUDIZED BED FL

Juray de Wilde, Jan Vierendeels and Erick Dick

Ghent University

Belgium

4. E12

NUMERICAL SIMULATION OF DISPERSE MULTIPHASE FLOWS WITH AN
APPLICATION IN POWER ENGINEERING

K. Bernert, Th. Frank, H. Schneider, K. Pachler

Chemnitz University of Technology

Germany

5. E13

FIBER COOLING MODELISATION DURING DRAW USING CFD

Denis Tschumperle

ALCATEL CABLE

France

6. E14

DETAILED MODELLING OF LIQUID/SOLID FLOWS WITH APPLICATIONS TO
FOOD PROCESSING

Christophe Duchanoy and Thibault Jongen

Unilever Research

The Netherlands

7. E17

MODELLING OF TURBULENT IMPINGING JET FLOW AND FLAME

W.T. Chan, T.J. Craft and Y. Zhang

UMIST

United Kingdom

8. E18

APPLYING CFD FOR THE DESIGN AND EVALUATION OF LABORATORY
COMBUSTOR

J.S. Bae and Y. Zhang

UMIST

United Kingdom

9. E20

DEVELOPMENT OF A NUMERICAL METHOD FOR SIMULATION OF
CONDENSING REAL GAS FLOWS

P.H. Kelleners and F. Put

University of Twente

The Netherlands

10.E21

NUMERICAL SIMULATION OF VISCOUS FLOW AROUND COMPLEX
AIRCRAFT CONFIGURATIONS USING HYBRID UNSTRUCTURED GRIDS

Roland Hoeld
EADS Deutschland GmbH
Germany

11. E22

ON THE USE OF ULTRASOUND IN CHEMISTRY: MODELLING OF SONOREACTORS

G.S. Servant
EDF, R&D Division
France

12.E23

COMPUTATIONAL STUDY OF THE EFFECT OF DIRECTION OF TIP LEAKAGE JET RE-
THE DOWNSTREAM MIXING PROCESS IN AN HP TURBINE STAGE WITH SHORT-HEIGHT

Piotr Lampart, Andrzej Gardzilewicz, Jerzy Swirydczuk, Krzysztof Koss
Sergey Yershov, Andrey Rusanov
Polish Academy of Sciences

Poland

13.E24

CFD INVESTIGATIONS OF ENDWALL CONTOURING IN LP TURBINES

Piotr Lampart
Polish Academy of Sciences
Poland

14. E25

HEAT TRANSFER FROM LAMINAR IMPINGING METHANE/AIR FLAMES

Chris R. Kleijn
Delft University of Applied Physics
The Netherlands

15. E26

TURBULENCE MODELLING IN A SINGLE NORMALLY IMPINGING JET

L. Thielen, K. Hanjalic, R. Manceau, J. Jonker
Delft University of Applied Physics
The Netherlands

16. E28

IMPLEMENTATION OF A TURBULENT GAS-PARTICLE FLOW MODEL USING A
GENERIC PDE SOLVER AND APPLICATION TO INDUSTRIAL FLOWS

Andrew J. Medlin and Vaibhav R. Deshpande
Swiss Center for Scientific Computing (CSCS)
Switzerland

17. E29

MEASUREMENT AND SIMULATION OF THE TURBULENT FLOW IN A
MONOLITHIC STIRRED TANK

H.P. Kritzinger, Jos Derksen and Harry E.A. van den Akker
Delft University of Applied Physics
The Netherlands

18. E32

USING A NEW KINETIC REDUCTION TECHNIQUE INSIDE FLUENT TO COMPUTE
POLLUTANT EMISSIONS IN A DOMESTIC BURNER

M. Embouazza, O. Cicquel, D. Thevenin, and N. Darabiha
CNRS and Ecole Centrale Paris
France

19. E34

MODELLING OF PARALLEL REACTIONS IN A TURBULENT CHANNEL USING
A FILTERED DENSITY APPROACH FOR LARGE EDDY SIMULATIONS

E. van Vliet, J.J. Derksen and H.E.A. van den Akker
Delft University of Applied Physics
The Netherlands

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SIMULATION OF THE TWO-PHASE FLOW IN A BIFURCATOR JUNCTION
S.A.A. Abdul Ghani and A. Aroussi
The University of Nottingham
United Kingdom
21. E38
ON THE FLOW STRUCTURE FAR OUTBOARD OF A HOVERING ROTARY
BLADE SYSTEM
S. Bhattacharyya and F.T. Smith
Indian Institute of Technology
India
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TWO-FLUID MODEL SIMULATIONS OF AN INTERNAL AIRLIFT LOOP
REACTOR
R.F. Mudde and H.E.A. Van den Akker
Delft University of Applied Physics
The Netherlands
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COMPUTATIONAL INVESTIGATION INTO PARTICULATE MATERIAL REMOVAL
IN A HOT GAS FILTRATION
M.H. Al-Hajeri, A. Aroussi and S.J. Pickering
Technical Studies College
Kuwait
24. E43
LEAK DETECTION IN PIPELINES
Y.A. Khulief and H.E. Emar-Shabaik
King Fahd University of Petroleum and Minerals
Saudi Arabia

25. SK82 Simulation of bubble rise and deformation in liquid using a front tracking
/ finite difference method

Jinsong Hua, Jing Lou, Kantharaj Murali, Kwok Hong. Lee and Kurichi Kumar
Institute of High Performance Computing

26. SK83

Visualization of vortical flow by restricted line integral convolution
Koji Koyamada, Hidetoshi Kotera and Akio Doi
Department of Software and Information Science, Iwate Prefectural University

27. SK84

Compact modeling for thermal simulation using response surface methodology
Masanori Kuzuno, Toshihiko Nishio, Kohji Koyamada
Design Methodology, Yasu, IBM Japan Ltd.

28. SK85

Numerical and experimental studies of two-phase flows in 3-d rectangular
channel with a rod inserted

Kenji Fukuda, Tatsuya Matsumoto, Nozomi Kamesako, Akihiro Uchibori,
Ryo Akasaka, Kiyoshi Nakagawa, Koji Morita and Akitoshi Hotta
Graduate School of Engineering, Kyushu University

Japan

29. SK86

Molecular dynamics simulation of alkane adsorption process in carbonaceous
adsorbents

Xinming Wang, Minyang Jia, Hirokuni Hiyama and Hiroyuki Hashimoto
Ebara Research Co. Ltd.

30. SK87

Numerical study on thermal hydraulic phenomena in a hemispherical gap under

core meltdown accident

31. Akihiro Uchibori, Tatsuya Matsumoto, Koji Morita, and Kenji Fukuda
6-10-1, Hakozaki, Higashi-ku, Fukuoka 812-8581, Japan
Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University
32. SK88

Natural and mixed convection around a cylinder enclosed with porous media
-a numerical study on comfort of clothed human being

Qingrong Bo and Tsuyoshi Nakajima
Department of Mechanical Engineering, Kobe University, Rokkodai 1-1, Nada-Ku,
Kobe 657-8501, Japan

33. SK89

Particle flow around an oscillating circular cylinder based on two-fluids model

Kazuhiro Tsuboi, and Shigeo Kimura
Dept. of System Eng., Ibaraki University,
Naka-Narusawa 4-12-1, Hitachi, Ibaraki 316-8511, JAPAN

34. SK90

Non-overlapped domain decomposition method for numerical simulation of
fluid flow in complex 3-d domains

Rongguo Huang, Bowen Huan, and Shuping Zhang
School of Power and Energy Engineering, Shanghai Jiao Tong University
People's Republic of China

35. SK91

Dynamic modeling of surging pressure pulsation in delivery flow of
hydraulic piston pump and development of new flow circuit mechanics

T. Tsuta, T. Umeda and T. Iwamoto
Faculty of Engineering, Hiroshima University

36. SK92

Unstructured grid generation for CAD of VFP type artificial heart

Satoyuki Kawano*, Takuma Katoh*, Kisa Matsushima*, Kazuhiro Nakahashi*,
Tomoyuki Yambe**, Shin-ichi Nitta** and Hiroyuki Hashimoto***

* Department of Aeronautics and Space Engineering, Tohoku University, Japan

** Institute of Development, Aging and Cancer, Tohoku University, Japan

*** Ebara Research Co. Ltd., Japan

37. Keynote-SK93

Shigeo Fujikawa

Department of Mechanical Engineering, Hokkaido University

Keynote-SK94

Toshiyuki Hayase

Institute of Fluid Science, Tohoku University

Katahira 2-1-1, Aobaku, Sendai 980-8577, Japan

38. A41. Simulation of the Opening of a Vacuum Breaker Valve

Alton J. Reich, CFD Research Corporation

Alex Dimeo, Target Rock Corporation

39. A42. F. McKenty, Marcelo Reggio (CERCA), J. Cortes, M.A. Ladron de Guevara

Instituto Tecnológico de Monterey (Mexico)

Numerical Investigation of the Manufacturing Process of Seamless Tubes

40.A43. Alex Alexandrov, Vladimir Kudriavtsev

Analysis of Coupled Internal/External HVAC Problem for a Passenger Car

41. A44. Development and Implementation of Reduced Chemistry into CFD Simulations
of Large Scale Combustion Systems

Cremer, M.A., Wang, D.H., Montgomery, C.J., and Denison, M.K.

Reaction Engineering International
Salt Lake City, UT 84101

42. A46. PHOENICS APPLICATIONS FOR NUCLEAR SAFETY ASSESSMENTS
M. An , W. Thompson¹, M. Wright , V. Agranat , M. Kawaji and A.M.C. Chan (Canada)

43. A47. NUMERICAL SIMULATIONS OF FLUID-STRUCTURE
THERMAL INTERACTION PHENOMENA
AT A T-JUNCTION OF LIQUID METAL FAST REACTOR PIPING SYSTEMS
Toshiharu Muramatsu
Japan Nuclear Cycle Development Institute, Japan

44. A50. Plasma Torch Interaction with a Melting Interface
--Work in Progress
Stephen D. Hill
Schlumberger Reservoir Completions Center
Prateen V. Desai
Georgia Institute of Technology

45. A52. THE ROLE OF COMPUTATIONAL TECHNOLOGIES IN SOLVING A FLUID INDUCED
PIPING VIBRATION PROBLEM
D.E. Botha, G.N. van Zyl & J.K. Roux , South Africa

46. A53. Simulation of Thermal Mixing in HVAC Designs with PowerFLOW
Charles G. Alexander, Exa Corporation , USA

47. A55. CFD for electronics cooling applications
Kaveh Azar, Lucent Technologies
Jackie Halliday, Exa Corp.

48. A58. An Investigation of Droplet Evaporation Models Used in Spray Simulations
G.F. Yao
The George W. Woodruff School of
Mechanical Engineering, Atlanta, Georgia

49. A63. Numerical Simulation of the Combustion Chemical Vapor Deposition of
Ba_xSr_{1-x}TiO₃ Thin Films
Miodrag Oljaca and John Amaya
MicroCoating Technologies Inc.,
Suresh Menon
School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA 30332

50. A65. NUMERICAL STUDY OF TRANSIENT CONDUCTION IN CYLINDERS
FOR LAMINATION
Alberto Hernandez Neto, Brazil

51. A69. Development of Robust CFD Code for Simulation of
Spray Cooling in Steam Conditioning Devices
G.F. Yao and K. Schoonover
Georgia Institute of Technology, Atlanta , USA

52. A71. NUMERICAL STUDY ON HYDRODYNAMICS OF ANTI-DOWN-SLIPPING
HOU Shuan-Di
Research Institute of Petroleum Processing SINOPEC
ZHONG Xiao-Xiang XU Ke-Jia LI Song-Nian YU Xiang-Lin
Research Institute of Petroleum Processing, P.R. CHINA

53. A72. Vladimir Kudriavtsev
Aircraft Deicing Simulation - System Level Case Study
CFD Canada, CANADA
54. A73. Computational Studies of Active Control of Boundary Layer Separation
Mehul Patel, Alan Cain
Orbital Research, Cleveland, Ohio, USA
55. A74. Secondary Flows in a Rotating Serpentine Circular Duct
Laker, Ghiaasiaan, Muller
Georgia Institute of Technology, USA
56. A77. SpinExpert – The Digital Expert for the Analysis and Design of
Fiber Spinning Operations
David L. Davidson, Solutia Inc., USA
57. A78. Justin Tyler Brown, G. Huang, W.M. Kelly, G.R. Furnish
CFD Design of Hand Drying device
University of Kentucky, Medventure Inc, USA
58. A81 CFD Analysis of Blood Sampling device
STUDENT PAPER
Darsh Ranjan, G. Huang, C. Knapp
University of Kentucky, Lexington, USA
59. A83. Hio-Wai Lao, Henry Neeman, D. Papavassiliou
Stochastic Estimation of Porous Media Properties
The University of Oklahoma, USA
60. A84. Jon Gabrys, Fuel Slosh Analysis Using CS-DYNA3D,
Boeing, USA
61. A45. SIMPLIFIED SIMULATION OF DYNAMIC LIQUID
PRESSURE IN RECTANGULAR VESSELS
H. N. Li, Y. Jia, S. Y. Wang and K. A. Wang
Shenyang Architectural and Civil Engineering Institute, P. R. China
Dept. of Civil Engineering, California State University, USA
62. A66. Miller, Ronald, Ford Motors
63. A48. A three dimensional computational model to investigate water flow
around the hull of a vessel
Matthew Glanville, Neihad Al-Khalidy, David Rennison, Uwe Kopke
Vipac Engineers and Scientists Limited
Australia
64. A54. Predictor System of Martensitic Phase Distribution in Automotive Components Quenched
Directly of Hot Working
Ana Laura Muñoz Enriquez, Jorge A. Cortés Ramírez
Center of Manufacturing Systems, ITESM, Monterrey Campus,
Eugenio Garza Sada 2501 Sur, Monterrey, N.L., México

65. SENSITIVITY ANALYSIS OF GRAVITY LEVEL ON DOUBLE DIFFUSIVE
FINGERING INSTABILITY
D. Castagnolo*, R. Savino**, F. Albano*, V. Vitagliano***
MARS Center, Napoli (Italy)