

COMPUTATIONAL THERMAL SCIENCES

AN INTERNATIONAL JOURNAL

CONTENTS VOLUME 9, 2017

Page Range of Issues

Issue 1: 1–92; Issue 2: 93–182; Issue 3: 183–282; Issue 4: 283–382;
Issue 5: 383–481; Issue 6: 483–582

ISSUE 1

- General Solutions of Convective Flows of MHD Casson Fluid with Slip and Radiative Heat Transfer at the Boundary** 1
M.A. Imran, N.A. Shah, K. Rafique, A. Sohail, & S. Ejaz
- Effect of Moving Flat Plate on Hydro-Magnetic Mixed Convection in a Porous Enclosure with Sinusoidal Heating Side Walls and Internal Heat Generation** 13
A.S. Begum & N. Nithyadevi
- Heat Transfer and Entropy Generation due to a Nanofluid over Stretching Cylinder: Effects of Thermal Stratification** 29
S.E. Ahmed, S.S. Mohamed, M.A. Mansour, & A. Mahdy
- Convecting Threshold in Nanofluid Driven by Centrifugal Forces in a Rotating Annular Hele-Shaw** 49
K. Souhar, M. Kriraa, L. Bammou, S. Alami, J. Bouchgl, M. Feddaoui, & S. Aniss
- Effective Medium Approximation for Conductivity of Unidirectional Coated-Fiber Composites** 63
B-V. Tran, D-C. Pham, & T-H-G. Nguyen
- Natural Convection Induced by Volumetric Heating in an Inclined Porous Cavity** 77
S. Benmenzer & M. Si-Ameur

ISSUE 2

- Numerical Investigation of Heat Transfer Enhancement using Detached Vortex Generators in Fin-and-Tube Heat Exchangers** 93
S. Agarwal & R.P. Sharma
- Opportunities to Reduce Fuel Consumption of a Duty Vehicle** 109
L. Boukhris & M. Bouchetara
- Numerical Simulation of Turbulent Thermal Mixing in a Rectangular T-Junction** 121
B.B. Sara, D. Ahmed Zineddine, N. Fadéla, & A. Abbès
- Numerical Study of Non-Boussinesq Convection in a Ventilated Cavity** 135
O. Chabani, S. Abide, N. Lamrous, & B. Zeghmati
- Development and Validation of the 3D Temperature Field Simulation for the Tilting Pad Journal Bearings** 151
M. Li, S. Zheng, G. Ying, & Q. Li
- MHD Natural Convection Boundary Layer Flow of Nanofluid over a Vertical Cone with Chemical Reaction and Suction/Injection** 165
P. Sudarsana Reddy, P. Sreedevi, & A.J. Chamkha

ISSUE 3

- Influence of Lateral Angle on Film Cooling Performance over Asymmetrical Turbine Blade** 183
M. Benabed

CFD Modeling of Non-Premixed Combustion of Pulverized Coal in a Furnace	195
<i>M.P.K. Naik & S.K. Dewangan</i>	
Optimization of Secondary Cooling Percentage during Semi-Continuous Copper Casting Process	213
<i>A.H. Hameed</i>	
Heat Transfer Enhancement of Uniformly/Linearly Heated Side Wall in a Square Enclosure Utilizing Alumina–Water Nanofluid	227
<i>S. Natesan, S.K. Arumugam, S. Murugesan, & A.J. Chamkha</i>	
Experimental and Numerical Investigations of Bubbling Fluidized Bed Apparatus to Investigate Heat Transfer Coefficient for Different Fins	243
<i>M. Farzinpour, S. Rasouli, & D. Toghraie</i>	
Boundary Layer Flow of Viscoelastic Nanofluid over a Wedge in the Presence of Buoyancy Force Effects	257
<i>M. Madhu & N. Kishan</i>	
Performance Analysis of Different Solvers for Computing the Radiative Transfer Equation in Complex Geometries using Finite Volume Method and Block Structured Grids	269
<i>F.C. Miranda, F. di Mare, A. Sadiki, & J. Janicka</i>	

ISSUE 4

Exothermically Reacting of Non-Newtonian Fluid Flow over a Permeable Nonlinear Stretching Vertical Surface with Heat and Mass Fluxes	283
<i>M.R. Eid & S.R. Mishra</i>	
Numerical Simulation of Melting and Solidification of Different Kinds of Phase Change Materials (PCM) Encapsulated in Spherical Nodules in a Water Flow	297
<i>K. Rachedi & A.I.N. Korti</i>	
Melting of Nanoparticle-Enhanced Phase Change Material in a Shell-and-Tube Latent Heat Storage Unit Heated by Laminar Pulsating Fluid Flow	311
<i>R. Elbahjaoui & H. El Qarnia</i>	
A Numerical Approach to Inverse Boundary Design Problem of Combined Radiation-Conduction with Diffuse Spectral Design Surface	335
<i>M.O. Panah, S.A.G. Nassab, & S.M.H. Sarvari</i>	
Prediction of Thermodynamic Stability Limits and Criticality Conditions for Binary Hydrocarbon Systems	351
<i>F.M. Al Sadoon, M. Qasim, & N.A. Darwish</i>	
Numerical Prediction of 3D Thermosolutal Natural Convection and Entropy Generation Phenomena within a Tilted Parallelepipedic Cavity with Various Aspect Ratios	363
<i>F. Oueslati & B. Ben-Beya</i>	

ISSUE 5

Prediction of Thermosolutal Convection in a Porous Medium with Soret-Dufour and Chemical Reaction Effects	383
<i>M. El Haroui, M. Sriti, D. Achemlal, & E. Flilihi</i>	
Computational Complexity of the Algorithm for a 2D Adaptive Mesh Refinement Method using Lid-Driven Cavity Flows	395
<i>Z. Li</i>	
Buoyancy-Driven Heat Transfer Enhancement in a Sinusoidally Heated Enclosure Utilizing Hybrid Nanofluid	405
<i>T. Tayebi & A.J. Chamkha</i>	

Heat and Mass Transfers by Natural Convection during Water Evaporation in a Vertical Channel	423
<i>O. Mechergui, X. Chesneau, & A.H. Laatar</i>	
Mixed Convective Heat Transfer of Immiscible Fluids in a Vertical Channel with Boundary Conditions of the Third Kind	447
<i>J.P. Kumar, J.C. Umavathi, A.J. Chamkha, & Y. Ramarao</i>	
MHD Mixed Bioconvection Stagnation-Point Flow of a Nanofluid toward Stretching Surfaces with Viscous Dissipation and Joule Heating Effects	467
<i>Z.A. Raizah</i>	

ISSUE 6

Effect of Fluid Yield Stress on Free Convection from an Isothermal Cylinder Adjacent to an Adiabatic Wall	483
<i>A.K. Baranwal & R.P. Chhabra</i>	
Study of Natural Convection with a Stabilized Finite Element Formulation	513
<i>M.F. Curi, P.A.B. De Sampaio, & M.A. Gonçalves Junior</i>	
Comparison of Performance of Different Multiphase Models in Predicting Stratified Flow	529
<i>S.K. Senapati & S.K. Dewangan</i>	
Numerical Investigation of Heat Transfer on Two Grooved Cylinders in a Tandem Arrangement	541
<i>O. Ladjedel, L. Adjlout, T. Yahiaoui, O. Imine, & O. Šikula</i>	
Comparative Study of Fluid Flow and Heat Transfer in Rectangular and Wavy Microchannel	549
<i>S.K. Dewangan, S.L. Sinha, & P.K. Gupta</i>	
The Investigation of the Heat Transfer Characteristics of a Cross-Flow Pulsating Jet in a Forced Flow	567
<i>U. Akdag, S. Akcay, & D. Demiral</i>	
Index, Volume 9, 2017	583

COMPUTATIONAL THERMAL SCIENCES

AN INTERNATIONAL JOURNAL

AUTHOR INDEX VOLUME 9, 2017

Page Range of Issues

Issue 1: 1–92; Issue 2: 93–182; Issue 3: 183–282; Issue 4: 283–382;

Issue 5: 383–481; Issue 6: 483–582

-
- | | | |
|--------------------------------------|-----------------------------|-----------------------------|
| Abbès, A., 121 | Ejaz, S., 1 | Natesan, S., 227 |
| Abide, S., 135 | El Haroui, M., 383 | Nguyen, T-H-G., 63 |
| Achemlal, D., 383 | El Qarnia, H., 311 | Nithyadevi, N., 13 |
| Adjout, L., 541 | Elbahjaoui, R., 311 | Oueslati, F., 363 |
| Agarwal, S., 93 | Fadéla, N., 121 | Panah, M.O., 335 |
| Ahmed Zineddine, D., 121 | Farzinpour, M., 243 | Pham, D-C., 63 |
| Ahmed, S.E., 29 | Feddaoui, M., 49 | Qasim, M., 351 |
| Akcay, S., 567 | Filihi, E., 383 | Rachedi, K., 297 |
| Akdag, U., 567 | Gonçalves Jr., M.A.,
513 | Rafique, K., 1 |
| Al Sadoon, F.M., 351 | Gupta, P.K., 549 | Raizah, Z.A., 467 |
| Alami, S., 49 | Hameed, A.H., 213 | Ramarao, Y., 447 |
| Aniss, S., 49 | Imine, O., 541 | Rasouli, S., 243 |
| Arumugam, S.K., 227 | Imran, M.A., 1 | Sadiki, A., 269 |
| Bammou, L., 49 | Janicka, J., 269 | Sara, B.B., 121 |
| Baranwal, A.K., 483 | Kishan, N., 257 | Sarvari, S.M.H., 335 |
| Begum, A.S., 13 | Korti, A.I.N., 297 | Senapati, S.K., 529 |
| Benabed, M., 183 | Krira, M., 49 | Shah, N.A., 1 |
| Ben-Beya, B., 363 | Kumar, J.P., 447 | Sharma, R.P., 93 |
| Benmenzer, S., 77 | Laatar, A.H., 423 | Si-Ameur, M., 77 |
| Bouchetara, M., 109 | Ladjedel, O., 541 | Šikula, O., 541 |
| Bouchgl, J., 49 | Lamrous, N., 135 | Sinha, S.L., 549 |
| Boukhris, L., 109 | Li, M., 151 | Sohail, A., 1 |
| Chabani, O., 135 | Li, Q., 151 | Souhar, K., 49 |
| Chamkha, A.J., 165, 227,
405, 447 | Li, Z., 395 | Sreedevi, P., 165 |
| Chesneau, X., 423 | Madhu, M., 257 | Sriti, M., 383 |
| Chhabra, R.P., 483 | Mahdy, A., 29 | Sudarsana Reddy, P.,
165 |
| Curi, M.F., 513 | Mansour, M.A., 29 | Tayebi, T., 405 |
| Darwish, N.A., 351 | Mechergui, O., 423 | Toghraie, D., 243 |
| De Sampaio, P.A.B., 513 | Miranda, F.C., 269 | Tran, B-V. |
| Demiral, D., 567 | Mishra, S.R., 283 | Umavathi, J.C., 447 |
| Dewangan, S.K., 195, 529,
549 | Mohamed, S.S., 29 | Yahiaoui, T., 541 |
| di Mare, F., 269 | Murugesan, S., 227 | Ying, G., 151 |
| Eid, M.R., 283 | Naik, M.P.K., 195 | Zeghmati, B., 135 |
| | Nassab, S.A.G., 335 | Zheng, S., 151 |

COMPUTATIONAL THERMAL SCIENCES

AN INTERNATIONAL JOURNAL

SUBJECT INDEX VOLUME 9, 2017

Page Range of Issues

Issue 1: 1–92; Issue 2: 93–182; Issue 3: 183–282; Issue 4: 283–382;
Issue 5: 383–481; Issue 6: 483–582

- adaptive mesh refinement, 395
adiabatic wall, 483
analytical solution, 77
aspect ratio, 363
binary mixtures, 351
Bingham number, 483
binodal, 351
bioconvection, 467
block structured grids, 269
boundary condition of third kind, 447
Brownian motion, 49, 165, 257
bubbling fluidized bed, 243
Casson fluid, 1
casting, 213
chemical reaction, 165, 383
circular cylinder, 483
circular fins, 243
CLSVOF, 529
coal injection, 195
composite material, 63
compound inclusion, 63
computational complexity, 395
computational fluid dynamics, 151, 513, 529
computational heat transfer, 549
conduction, 335
conductivity, 63
conjugate heat transfer, 151
convection, 49
copper, 213
critical points, 351
detached vortex generator, 93
different phase change materials, 297
differential transform method, 447
discrete phase model, 195
double-diffusive natural convection, 363
dynamic mesh, 151
effective medium approximation, 63
enclosure, 13, 405
enhanced heat transfer, 93
entropy generation, 29, 363
equivalent inclusion, 63
exothermically reaction, 283
FEM, 257
film cooling effectiveness, 183
film cooling, 567
fin-and-tube heat exchanger, 93
finite volume method, 269, 395,
finite element method, 165, 513
forced convection, 29
forced flow, 567
free convection, 1, 383, 513
fuel economy, 109
general solutions, 1
grooves, 541
gyrotactic microorganisms, 467
heat and mass transfer, 283, 363, 423
heat generation, 77
heat transfer enhancement, 567
heat transfer fluid (HTF), 311
heat transfer mechanism, 93
heat transfer, 29, 135, 541
Hele-Shaw cell, 49
hybrid nanofluid, 405
immiscible fluids, 447
inclined cavity, 77
inclined channel, 423
inverse problem, 335
latent heat storage unit (LHSU), 311
lateral angle, 183
lid-driven cavity flow, 395
liquid film, 423
low Mach number, 135
magnetic field, 13
measurements of fuel consumption, 109
melting, 297
metal casting, 213
MHD, 1, 467
mixed convection, 13, 447
modelling, 109
multiphase flow, 529
MVOF, 529
nanofluid, 29, 49, 227, 257, 467, 549
nanoparticle-enhanced phase change material (NEPCM), 311
nanoparticles, 311
natural convection, 77, 227, 405, 423, 483
non-Newtonian fluid, 283
non-premixed combustion, 195
nonuniform heating, 13
numerical simulation, 135, 423
Nusselt number, 423, 541
permeable nonlinear stretched vertical surface, 283
phase change material (PCM), 311
porous media, 77
porous medium, 383
Prandtl number, 483
primary cooling, 213
pulsating flow, 311
pulsating jet, 567
radiation model, 195

radiation, 335
radiative heat transfer, 1
radiative transfer equation, 269
Rayleigh number, 483
rectangular fins, 243
rectangular microchannel, 549
Rosin-Rammler size law, 195
RTE CFD coupling, 269
SAS-SST, 121
secondary cooling, 213
second-order time-accurate methods, 513
semi-continuous, 213
showerhead injection, 183
SIMPLE algorithm, 13
sinusoidal heating, 405
slip condition, 1
solidification, 297
Soret-Dufour effects, 383
spectral surface, 335
spherical capsules, 297
spinodal, 351
square cavity, 227
SST turbulence model, 183
stability limits, 351
stability, 49
stabilized finite element method, 513
stratified flow, 529
stretching cylinder, 29
Striping, 121
suction or injection, 383
suction/injection, 165
sweeping algorithm, 269
thermal behavior, 297
thermal interaction, 297
thermal performance, 151
thermal stratification, 29
thermophoresis, 49, 165, 257
three-dimensional flow, 363
tilted enclosure, 363
tilting pad journal bearing (TPJB), 151
T-junction, 121
tractive resistances and driving style, 109
transmission design, 109
triangular fins, 243
turbulence models, 121
uniformly cooled, 227
uniformly/linearly heated, 227
URANS, 121
user-defined function (UDF), 151
ventilated cavity, 135
vertical channel, 423
vertical cone, 165
vertical plate, 383
viscoelastic, 257
viscous dissipation, 467
VOF, 529
Vortex, 541
wavy microchannel, 549
wedge, 257