

# PHOENICS Publications 2025-2001

## 2025

J.Chen, J.Zeng, T.Huang, Y.Wang, H.Yang, X.Yu, Z.Wang

Impacts of Plant Configuration on the Outdoor Wind Comfort of Subtropical Coastal Campuses: Evidence from a Study of Quanzhou

*Forests* **2025**, 16(3), 461; <https://doi.org/10.3390/f16030461>

J.I.Soto, G.V.Messa, M.R.Malin, W.Brevis

A simple approach for effective CFD simulation of turbulent pipe transport of shear-thinning, power-law fluids

*Applied Mathematical Modelling*, Vol.150, Part A, February 2026, 116324

F.A.Prasetya, T.Fukasawa, T.Ishigami, K.Fukui

Classification performance analysis of a louver classifier with a tilted sidewall and its application to the separation of unburned carbon from biomass combustion ash

*Separation and Purification Technology* 355 (2025) 129778

M.Yin, B-J.He

Performance-based urban ventilation corridor for actual achievement of environmental benefits

*Building and Environment* 270 (2025) 112536

E. Martínez-Espinosa, W. Vicente, M. Salinas-Vazquez, J. Ramírez-Cruz.

Numerical study of the effect of flow patterns on contaminant removal in a hospital ward with symmetrical and asymmetrical inlet port arrangements

*Science of the Total Environment* 979 (2025) 179439

S.Esmaeli, S.H.Park, J.D.Yan

Radiative behaviour of nozzle-confined switching arcs burning in axially blown C4F7N + CO2 + PTFE mixture

*International Journal of Thermal Sciences* 213 (2025) 109825

H.Wang et al.

Optimizing vertical urban development: The role of a multidimensional assessment framework for balancing vertical growth and habitability

*Habitat International* 161 (2025) 103424

Z.Wang et al.

Evaluation of the influence of traditional village square layout factors on wind comfort.

*Building and Environment* 267 (2025) 112160

K.Kowalski, P. Błasiak, S.Pietrowicz

A review of scraped surface heat exchangers: Parameters describing thermal-fluid processes, influence of their internal geometric parameters and energy consumption

*International Journal of Heat and Mass Transfer* 236 (2025) 126336

W.Huang, Q.Xu, B.Zhao, Q.Lv, G.Wang,  
Urban multi-scale building energy modelling (BEM) and CFD integration: Tools, strategies and accuracy for energy microclimate analysis.  
Journal of Building Engineering, 103 (2025) 112041.

H.Fu, Y.Jiao, L.Deng, W.Wang  
Dynamic impacts of vegetation growth and urban development on microclimate and building energy consumption  
Sustainable Cities and Society 126 (2025) 106382

## 2024

M.Yuan, Y.Geng, B.Lin, H.Tang, Y.Yang  
Optimization of indoor temperature sensor deployment in large spaces for multiple building operation scenarios using the genetic algorithm  
Journal of Building Engineering 96 (2024) 110446

Q.Zhang, L.Li, J.Zhou, W.W.Braham, N.Ma  
A spatial analysis of ozone and PM2.5 distribution for assessing design factors of healthy buildings  
Journal of Building Engineering 89 (2024) 109357

D.Song, M.Lu, J.Xing  
Impact of spatial layout on vertical wind conditions and comfort levels in high-rise residential buildings in Shenzhen  
Urban Climate 55 (2024) 101949

B.Zamora  
Numerical investigation on the effects of non-uniform azimuthal heating in natural convection airflow within a vertical tube  
International Communications in Heat and Mass Transfer 159 (2024) 108131

T.Nakumura, et al.  
Morphological changes in the inferior nasal passage associated with superior repositioning of the maxilla with/without horseshoe osteotomy or turbinectomy  
Int. J. Oral Maxillofacial Surgery (2024); 53: 1032–1040

T.Kitamura et al.  
Effects of adenoid hypertrophy on nasopharyngeal airway ventilation: A computational fluid dynamics study  
International Journal of Pediatric Otorhinolaryngology 180 (2024) 111961

S.B Beale, M.R Malin, H Marschall  
Remarks on the Physical Basis for the Construction of Diffusion Flux Terms in Finite-volume Equations  
(2024) Computational Thermal Science, 16(3):1-17.

A.Ghobadian, I.Talavera, S.Bresciani, C.Troise  
Successful establishment of innovation systems for low visibility breakthrough innovations: The role of system builders, proximal institution and legitimacy  
Technological Forecasting & Social Change 201 (2024) 123210

M.Wojcik, L.Szabłowski , O.Dybinski

Comparison of mathematical models of steam methane reforming process for the needs of fuel cells  
International Journal of Hydrogen Energy, Vol.52, Part A, (2024) 965-982

W. Li, Z. Zhou, C.Wang, Y.Han

Impact of outdoor microclimate on the performance of high-rise multi-family dwellings in cold areas and optimization of building passive design  
Building and Environment 248 (2024) 111038

L.Jiang, Z.Fan, Y.Gao, X.Su, J.Rashidov

Optimization of temperature prediction algorithms and simulation of future neighborhood-scale thermal environments in Chongqing  
Building and Environment 266 (2024) 112146

Q.Wen, H.Liu, Q.Zhou, Q.Guo, P.Wang, L.Zhang

The Impact of Ground-Floor Elevation of School Buildings on Courtyard Wind Environment  
<https://doi.org/10.3390/buildings14041146>

T.Chen, Q.Liu,X.Wu

Comparison Of Wind Environment Adaptation and Street Space In Traditional Coastal Villages — A Case Study Of Typical Coastal Villages In Fuzhou City  
E3S Web of Conferences , 01018 (2024) ARFEE 2023 490 <https://doi.org/10.1051/e3sconf/202449001018>

B.Zamora

Impact of variable properties in natural convection airflows within simple and adiabatically-extended vertical tubes  
International Journal of Thermal Sciences 201 (2024) 109028

## 2023

T.Calisir, A.B.Çolak, D.Aydin, A.S.Dalkilic, S.Baskaya

Artificial neural network approach for investigating the impact of convector design parameters on the heat transfer and total weight of panel radiators.  
International Journal of Thermal Sciences 183 (2023) 107845

W.Chen, J.Zhang, S.Liu, S.Liang, Y.Zhang, S.Fu

The spatial configuration of buildings: A vital consideration impossible to ignore in regulating urban land surface temperature? Evidence from 35 Chinese cities  
Science of the Total Environment 865 (2023) 160946

A.M. Hassan

UMC-based models: An integrating Urban-Micro-Climate performance analysis and numerical methods  
Renewable and Sustainable Energy Reviews 181 (2023) 113307

K. Hata, M. Shibahara

Helically-coiled-wire-induced swirl flow heat transfer and pressure drop in a circular tube under velocities

controlled

International Journal of Heat and Mass Transfer 204 (2023) 123849

Y.P.Lin, T.L.Huang, S.C.Chung, C.M.Lai

Effect of outdoor wind on the hybrid natural ventilation performance of monitor roofs

Alexandria Engineering Journal 80 (2023) 584–593

A.Pohl, Y.Paulley, A.Smith, O.Gustafssona, S.Möller, J. Allvar

The impact of exhaust plumes on the infrared signature of combat vehicles – an experimental and analytical study

Journal of Quantitative Spectroscopy & Radiative Transfer 306 (2023) 108649

J.Ren, K. Shi, X.Kong, H.Zhou

On-site measurement and numerical simulation study on characteristic of urban heat island in a multi-block region in Beijing, China

Sustainable Cities and Society 95 (2023) 104615

P. van den Engel, M.R.Malin, N.K.Venkatesh1 and L.A. de Araujo Passos

Performance of a Phase Change Material Battery in a Transparent Building

Fluid Dynamics & Materials Processing, (2023), Vol.19, No.3

H.Wang, J. Zhu, Y.Dai, H.Hu

A simplified cooling load calculation method based on equivalent heat transfer coefficient for large space buildings with a stratified air-conditioning system

Energy & Buildings 296 (2023) 113370

L.Xiang, Q.Meng, P.Ren

Effects of environmental and architectural factors on chloride-salt deposition on coastal building surfaces in the Zhujiang River Estuary

Building and Environment 242 (2023) 110554

X.Ying, X.Qin, L.Shen, C.Yu, J.Zhang

An intelligent planning method to optimize high-density residential layouts considering the influence of wind environments

Heliyon 9 (2023) e13051

X.Zhang, Y.Gao, Q.Tao, Y.Min, J.Fan

Improving the pedestrian-level wind comfort by lift-up factors of panel residence complex: Field-measurement and CFD simulation

Building and Environment 229 (2023) 109947

Zefa Wang, Tingfeng Liu, Xiaogang Wu, Jing Chen & Xujun Liang

Influence of Doorway Position on Wind Comfort in Beijing Quadrangle Dwellings (2023)

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Morphological comparative assessment of a rooftop solar chimney through numerical modelling  
International Journal of Mechanical Sciences 227 (2022) 107441

B.Sun, H.Zhang, L.Zhao, K.Qu, W.Liu, Z.Zhuang, H.Ye

Microclimate Optimization of School Campus Landscape Based on Comfort Assessment  
(2022), Buildings, 12, 1375

M.Nurmalisa, T.Tokairin, T.Kumazaki, K.Takayama, T.Inoue

CO<sub>2</sub> Distribution under CO<sub>2</sub> Enrichment using Computational Fluid Dynamics considering Photosynthesis in a Tomato Greenhouse

MDPI, Agricultural Science & Technology, Appl. Sci. **2022**, 12(15), 7756; <https://doi.org/10.3390/app12157756>

M.Nurmalisa, T.Tokairin, K.Takayama and T.Inoue

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Application of CFD plug-ins integrated into urban and building design platforms for performance simulations: A literature review

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Y.Song, Z.Zhang, S.Cao, T.Du, H.Guo, J.Deng

An investigation into the cooling effect of air desuperheater tower: A novel method to mitigate the heat island effect

Journal of Cleaner Production 367 (2022) 133080

T.A Chrysoloras & NC Markatos

Mathematical Modelling & Computer Simulation of the Flow Around a Formula 1 Racing Car

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Dundrum Village Strategic Housing Development, Microclimatic Wind Analysis and Pedestrian Comfort Report  
IN2 Project No. D2141

<https://www.pleanala.ie/publicaccess/EIAR-NIS/313220/Dundrum%20Village/5.%20%20%20DVSVD%20STAGE%203%20-%20OTHER/DVSVD%20-%20Microclimatic%20Wind%20Analysis%20and%20Pedestrian%20Comfort%20Report.pdf?r=311964>

Vinko Potocnik & John Ludwig

New ESTER/PHOENICS – An Upgrade 3D MHD Modelling Software for Aluminium Reduction Cells

(2022) TRAVAUX 51. Proceedings of the 40<sup>th</sup> International ICSOBA Conference, Athens, 10-14 October

Amit Jha

Magnetic Compensation Loop Design using Transient ESTER/PHOENICS MHD Simulations

(2022) TRAVAUX 51. Proceedings of the 40<sup>th</sup> International ICSOBA Conference, Athens, 10-14 October

# 2021

T. Calisir, S. Baskaya,

The influence of different geometrical dimensions of convectors on the heat transfer from Panel Radiators,  
SN Appl. Sci. 3 (2021) 284

Marco A Ramirez-Argaez, Gerardo Trapaga & Jonas Alexis

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(2001) Published in ISIJ International – January

M.Nurmalisa, T.Tokairin, K.Takayama and T.Inoue

Numerical simulation of detailed airflow distribution in newly developed photosynthesis chamb

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S.Alkhalaf, A.M.Vazquez

Three-Dimensional Simulations of Offshore Oil Platform in Square and Diamond Arrangements

Hindawi, Advances in Mathematical Physics, Volume 2021, Article ID 5578391, 8 pages,

<https://doi.org/10.1155/2021/5578391>

M. Rajguru, J. Singh, D. Datta, H. P. Rammohan

3D Computational Fluid Dynamics Analysis to Predict Poison Jet Growth in Moderator  
inside Calandria during SDS#2 actuation

Proceedings of the 26th National and 4th International ISHMT-ASTFE Heat and Mass Transfer Conference  
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Giorgio Besagni, Nicolo Cristiani, Lorenzo Croci, Gael Raymond Guedon, Fabio Inzoli

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approaches, comprehensive validation & assessment of ejector component efficiencies.

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Vitor Goncalves, Yewande Ogunjimi & Yeonsook Heo

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Xiaodong Liu, Li Yang, Shengnan Niu

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Investigation of air filter properties of nanofiber non-woven fabric manufactured by a modified melt-blowing method along with flash spinning method.

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Zouhair Hafsia, Saliha Nouri, Salah Mahmoud Boulaaras, Ali Allahem, Salem Alkhalaf & Aldo Munoz Vazquez  
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G.V. Messa, M.R. Malin, V. Matousek

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G.V. Messa, Q. Yang, O.E. Adedeji, Z. Chara, C.A.R. Duarte, V. Matousek, M.G. Rasteiro, R.S. Sanders, R.C. Silva, & F.J. de Souza

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Parkgate Street Tower, Microclimatic Wind Analysis and Pedestrian Comfort

IN2 Project No. D2012

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## 2020

Hongqiao Qin, Bo Hong, Boze Huang, Xue Cui, Ting Zhang

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