ISLAM ABOUELHAMD

Nationality: Egyptian
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WORK EXPERIENCE

Research Assistant Professor (Postdoctoral)	**Kyushu University, Department of Environmental and Energy Engineering, Major of Mechanical Systems Engineering, Faculty of Engineering Sciences, Fukuoka (Japan)** *Conducting computational and experimental research for indoor air assessments and public health concerns. Computational fluid dynamics (CFD) and thermal mannikins are the most utilized tools.*	**Oct. 2025 – Now**
Research Assistant (Part time)	**Kyushu University, Interdisciplinary Graduate School of Engineering Sciences, Fukuoka (Japan)** *Teaching and assisting in several research projects related to energy and environment using computational fluid dynamics tools (CFD) to undergraduate and Master students.*	**Apr. 2023 – Sep. 2025**
Assistant Lecturer	**Assiut University, Department of Architectural Engineering, Assiut (Egypt)** *Teaching and assisting in several subjects for undergraduate students, such as indoor design, fluid dynamics, ventilation concepts, and environmental design.*	**Sep. 2015 – Sep. 2018 & Apr. 2021 – Sep. 2022**
Architectural Engineer. (Part time)	**BONIAN MISR for Buildings Engineering, consulting, and Real Estate investments, Assiut (Egypt)** *Participated in several projects for two years duration through urban and architectural projects, visualization, and landscape planning*	**Nov. 2015 – Sep. 2018**

EDUCATION

Ph.D. Degree	**Kyushu University, Interdisciplinary Graduate School of Engineering Sciences, Fukuoka, (Japan)** *By using in-silico application, I have conducted multiple research projects to investigate public health and thermal comfort in indoor and semi-outdoor environments. The CFD was the main technique that I used (see the latest publications). However, since the last Ph.D. year, I started to conduct experimental studies using human thermal manikin, subjective panelists, and Gas-chromatography analysis.*	**Oct. 2022 – Sep. 2025**

M.Sc. Degree	**Technical University of Berlin, Department of Urban Development, Berlin (Germany).** *Gained several experiences in terms of urban planning, urban ecology, urban analysis, BIM modeling, CFD for urban analysis, Energy Efficiency, environmental planning, urban economy, and project management.*	**Oct. 2018 – Feb. 2021**
B.Sc. Degree	**B.Sc. Degree in Architectural Engineering, Assiut University, Assiut (Egypt).** *I have studied 57 subjects in 10 semesters (regular duration in Egypt) about building constructions, architectural design, theory and history of architecture, urban planning, and environmental designs.*	**Oct. 2010 – July 2015**

LANGUAGES

- ***Arabic**: Native Language*
- ***English**: High level in Listening, Speaking, Reading, and Writing (C1)*
- ***Japanese**: Basic Communications (N4)*
- ***Germany**: Basic Communications (A2)*

COMPUTER SKILLS

- ***Applications:** CFD tools such as ANSYS-Fluent and Open-FOAM, Fortran, MATLAB, AutoCAD, Python coding, 3D-max, Revit, Envi-met, Design-builder, and GIS.*

PROFESSIONAL SKILLS

- ***Collaborative Teamwork**: Engaged with various associations to conduct multidisciplinary research projects.*
- ***Scientific Writing**: Experienced in writing, submitting, and publishing manuscripts in high-impact, peer-reviewed journals.*
- ***Problem-Solving Expertise**: Quickly analyze and resolve computational challenges using innovative solutions.*
- ***High-Performance Computing**: Proficient in utilizing supercomputers for solving complex fluid and particle dynamics simulations.*
- ***Cross-Cultural Collaboration**: Worked and studied in multinational teams, fostering positive and productive relationships.*
- ***Self-Management**: Strong organizational skills with the ability to manage tasks efficiently and maintain focus on objectives.*

LATEST PUBLICATIONS

[1] **Islam M. S. Abouelhamd,** Kazuki Kuga, and Kazuhide Ito (2026). Indoor air pollution and direct second-hand exposure from single E-cigarette puff. *Building and Environment*, *302*, 114829. https://doi.org/10.1016/j.buildenv.2026.114829 https://doi.org/10.1016/j.buildenv.2026.114829

[2] Aboelsaud, M., **Abouelhamd, I. M. S**., Kuga, K., Inthavong, K., & Ito, K. (2026). Reynolds-averaged Navier–Stokes and stress-blended eddy simulation applications toward realistic cough jet simulations in different oral configurations. *Physics of Fluids, 38*(4), 041903. https://doi.org/10.1063/5.0316118

[3] R. Sakata, **Islam. M. S. Abouelhamd**, K. Kuga, and K. Ito (2026). Role of pollen particle shape, breathing mode, and wind velocity on human aspiration and deposition efficiencies. *Building and Environment*, 292, 114308–114308. https://doi.org/10.1016/j.buildenv.2026.114308

[4] **Islam M. S. Abouelhamd**, Kuga, K., Saito, K., Takai, M., Kikuchi, T., and Ito, K. (2025). Experimental and computational predictions of odorant transport dynamics from indoor environment to olfactory tissue. *Sustainable Cities and Society*, 126, 106397–106397. https://doi.org/10.1016/j.scs.2025.106397

[5] **Islam M. S. Abouelhamd,** Kazuki Kuga, Thibault Mansuy, and Kazuhide Ito (2025). Respiratory retention of 35 toxicants from e-cigarette gaseous emissions: comprehensive numerical study. *Building and Environment*, 285, 113663–113663. https://doi.org/10.1016/j.buildenv.2025.113663

[6] **Islam M. S. Abouelhamd**, Kuga, K. and Ito, K. (2024). Convective heat transfer and drag coefficients of human body in multiple crowd densities and configurations in semi-outdoor scenarios. *Building and Environment*, 265, pp.111983–111983. https://doi.org/10.1016/j.buildenv.2024.111983

[7] **Islam M. S. Abouelhamd**, Kuga, K., Yoo, S.-J. and Ito, K. (2024). Effect of crowd density, wind direction, and air temperature on the formation of individual human breathing zones in a semi-outdoor environment. *Sustainable cities and society*, 103, pp.105274–105274. https://doi.org/10.1016/j.scs.2024.105274.

[8] Kuga, K., Kizuka, R., **Islam.M.S. Abouelhamd**, and Ito, K. (2024). Aspiration efficiency and respiratory tract deposition of indoor suspended micro-particles during steady and transient breathings. *Building and Environment,* 249, p.111114. https://doi.org/10.1016/j.buildenv.2023.111114.

[9] **Islam M. S. Abouelhamd,** Paulus van der Kuil, and Uwe-Jens Walthe (2023). Investigating the Influence of Urban Density and Concentrations on Commuting Distance and Time: Empirical Evidence from Suhag City. *Proceedings of International Exchange and Innovation Conference on Engineering & Sciences (IEICES)*, 9, pp.279–286. https://doi.org/10.5109/7157985.

[10] **Islam M.S. Abouelhamd**, Kuga, K., Yoo, S.-J. and Ito, K. (2023). Identification of probabilistic size of breathing zone during single inhalation phase in semi-outdoor environmental scenarios. *Building and Environment*, 243, p.110672. https://doi.org/10.1016/j.buildenv.2023.110672.

[11] Nyabonyi, R., **Islam M.S. Abouelhamd**, Madadi, V., Muriithi, P., Njiiri, P., Wanjohi, J.M. and D.O, F. (2023). The Legacy of urban sprawl on wildlife conservation: A case study of Nairobi National Park. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences (IEICES), 9, pp.305–312. https://doi.org/10.5109/7157994.

[12] **Islam M.S. Abouelhamd** (2021). The relationship between urban spatial structure and commuting patterns: literature review. *JES. Journal of Engineering Sciences*, 49(5), 662-678. https://journals.ekb.eg/article_186880.html

CONFERENCES AND WORKSHOPS

(Peer-Reviewed)

Indoor Air Conference: Enhancing Wellbeing in Existential Challenges – Deepening Understanding, Building Resilience, Singapore (2026)

COBEE 2025: 6th International Conference on Building Energy and Environment Eindhoven, The Netherlands (2025)

Indoor Air Conference: Sustaining the Indoor Air Revolution: Raise Your Impact HAWAII, USA (2024)

International Conference for Nucleation and Atmospheric Aerosols Brisbane, Australia (2023)

The Second Memaryat International Conference: Architecture and Urban Resiliency, Jeddah, Saudi-Arabia (2018).

(Abstract-Reviewed)

Annual Conference for the indoor environment society in Japan. Okinawa, Japan (2023)

Urban Mobility Mapping Workshop, Hurghada, (2019). Workshop to improve the quality of urban mobility mapping in Hurghada city in Egypt.

Waterfront For Everyone, Alexandria & Jeddah, (2018). A workshop with two phases, first phase in Alexandria, and the second phase in Jeddah, KSA.

HONORS AND AWARDS

- *MEXT-scholarship for pursing Ph.D. in Japan, 2022-2025.*
- *DAAD scholarship for pursing M.Sc. degree in Germany, 2018-2021.*
- *Inspire the Future Egypt. (BIM Competition), 2016, Revit Architectural Visualization. Vinsys – Autodesk company. 3rd Prize.*

REFERENCES

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