

# Theofanis Psomas

**Nationality:** Greek

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**Date of birth:** 02/03/1983

**Gender:** Male

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 **Address :** 53, Marklandsgatan, 41477 Gothenburg (Sweden)

## JOB-RELATED SKILLS

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### Job-related skills

Sustainable building energy design, building performance simulation and optimization, energy renovation, natural and hybrid ventilation, thermal comfort and indoor air quality assessment (IEQ), building monitoring, building automations and smart control, HVAC design, research and development (R&D).

## WORK EXPERIENCE

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### Postdoc Researcher

**Chalmers University** [ 15/02/2020 – Current ]

**Address:** 6, Sven Hultins Gata, 41296 Gothenburg (Sweden)

Building Services Engineering

Title project: I-CUB: "Indoor Climate-Users-Buildings" - interrelationships affecting residential thermal comfort and building related health symptoms.

Funded by FORMAS.

Drivers of heating patterns and their impact on residential energy use.

Funded by Energimyndigheten.

### Project Researcher

**Institute of Building Research and Innovation** [ 01/06/2018 – 31/01/2020 ]

**Address:** 23/3, Wipplingerstraße, 1010 Vienna (Austria)

IEA EBC Annex 80 "Resilient cooling."

## Research Assistant

**Aalborg University** [ 01/06/2017 – 31/12/2017 ]

**Address:** 23, Thomas Manns Vej, 9220 Aalborg (Denmark)

The Faculty of Engineering and Science

Department of the Built Environment

Division of Architectural Engineering

Energy in Buildings Research Group

Ventilation and Airflow in Buildings Research Group

## PhD Researcher

**Aalborg University** [ 01/06/2014 – 31/05/2017 ]

**Address:** 23, Thomas Manns Vej, 9220 Aalborg (Denmark)

The Faculty of Engineering and Science

Title project: "Ventilative cooling in energy renovated residences."

Funded by EUDP, Velux A/S, Dovista A/S, Visility ApS, Aalborg University.

"The sustainable roof window."

Funded by EUDP, Velux A/S, Danish Technological Institute, Aalborg University.

## Project Researcher

**IEA EBC Annex 62 "Ventilative cooling."** [ 01/06/2014 – 31/12/2017 ]

- <http://venticool.eu/>

Subtask B "Solutions and technologies." (Co-Leadership)

## Lecturer-Evaluator

**Aalborg University** [ 2015 – 2016 ]

**Address:** 23, Thomas Manns vej, 9220 Aalborg (Denmark)

The Faculty of Engineering and Science

Postgraduate course: "Building energy modelling."

Postgraduate (M.Sc.): "Building energy design."

## Research Assistant

**Wollongong University (SBRC)** [ 11/2016 – 12/2016 ]

**Address:** Innovation Campus, Squires Way, Fairy Meadow, 2519 Wollongong (Australia) - <https://sbrc.uow.edu.au/index.html>

## Civil Engineer, Self Employed

**Ecodomi Aigaiou Consultancy Company** [ 01/01/2008 – 31/05/2014 ]

**Address:** 2nd km Mytilene Loutron, 81100 Lesvos (Greece)

Owned and operated a Civil Engineering firm to assist with relevant projects in the North-East Aegean, Greece. Contracts included design and construction for new private residential buildings and energy renovations. Adept area dealer and installer of insulation and waterproofing materials. Energy auditor (European Energy Performance Certificates).

## Civil Engineer

**National Tourism Office of North-East Aegean** [ 01/03/2011 – 31/10/2011 ]

**Address:** 6, James Aristarchou, 81100 Mytilene (Greece)

Project management.

## Civil Engineer

**Port Authority of Lesvos** [ 01/06/2008 – 31/01/2009 ]

**Address:** Port of Mytilene, 81100 Mytilene (Greece)

Project management.

## Site Engineer

**Minavra Construction Company** [ 01/01/2008 – 31/05/2008 ]

**Address:** 4, Saronikou Kallithea, 17673 Athens (Greece)

Assistant site engineer of the project "Total renovation of the adobe Byzantine church of St. Marina in Lesvos island, Greece."

## Geotechnical Engineer

**Geomeleti Consultancy Company** [ 09/2006 – 02/2007 ]

**Address:** 44, Michalakopoulou, 11528 Athens (Greece) - <http://www.geomeleti.gr>

Geotechnical design and geological investigations.

## Research Assistant

**National Technical University of Athens** [ 01/03/2005 – 31/08/2005 ]

**Address:** 9, Heroon Polytechniou, 15780 Athens (Greece)

Department of Civil Engineering

Research project funded by Egnatia Odos co. and National Technical University of Athens, related to the tunnels of Egnatia highway in Greece, under the supervision of Prof. P. Marinos.

## EDUCATION AND TRAINING

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### Doctor of Philosophy

**Aalborg University** [ 01/06/2014 – 01/06/2017 ]

**Address:** Aalborg (Denmark)

**National classification :** PhD

Thesis title: "Ventilative cooling in energy renovated single-family houses in temperate climates.", under the supervision of Prof. P. Heiselberg.

### Smart Energy Grids

**National Kapodistrian University of Athens** [ 21/01/2014 – 21/04/2014 ]

**Address:** Athens (Greece)

**National classification :** Certificate

Conceptual models and domains, IEC 61850, blackouts, renewable energy sources, vehicle to grid applications and others.

### Climate Engineer (Future Building Solutions)

**Danube University of Krems** [ 01/09/2011 – 06/06/2013 ]

**Address:** Krems (Austria)

**National classification :** MSc

Thesis title: "Climate change's impact in designing NZE single family buildings in the hottest area of Greece.", under the supervision of Prof. M. Santamouris (National Kapodistrian University of Athens) and Prof. P. Holzer (Institute of Building Research and Innovation of Austria).

### Soil Mechanics and Environmental Geotechnics

**Imperial College** [ 01/09/2005 – 01/11/2007 ]

**Address:** London (United Kingdom)

**Field(s) of study:** Geotechnical Engineering

**National classification :** MSc, DIC

Thesis title: "Assessment of total stresses of Evinos dam from field data and numerical analysis.", under the supervision of Prof. L. Zdravkovic.

### Civil Engineer (5yrs course)

**National Technical University of Athens** [ 11/10/2000 – 31/08/2005 ]

**Address:** Athens (Greece)

**National classification :** BSc

Structural orientation. Score: 79.4% (Top 5%).

Thesis title: "The technical-geological behaviour of the flysch in tunnel portal slopes; suggestions on their design. The example of Egnatia Road.", under the supervision of Prof. P. Marinos and Ass. Prof. G. Tsiampaos. Score: 100%.

## LANGUAGE SKILLS

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Mother tongue(s):

**Greek**

**English**

**LISTENING: C2 READING: C2 UNDERSTANDING: C1**

**SPOKEN PRODUCTION: C2**

**SPOKEN INTERACTION: C2**

**German**

**LISTENING: A2 READING: A2 UNDERSTANDING: A1**

**SPOKEN PRODUCTION: A2 SPOKEN INTERACTION: A2**

**Danish**

**LISTENING: A1 READING: A1 UNDERSTANDING: A1**

**SPOKEN PRODUCTION: A1 SPOKEN INTERACTION: A1**

## DIGITAL SKILLS

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**EnergyPlus / Design Builder / SPSS Statistics / PYTHON / Machine Learning**

## ORGANISATIONAL SKILLS

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**Organisational skills**

- Leadership (responsible for a team of researchers from 14 countries)
- Pro-active, self-directed and work well with others
- Explore, accomplish, test and demonstrate innovative solutions for the built environment
- Development and implementation of course assessment material
- Course curriculum mapping and development of lectures and web tutorial
- Practicum supervisor of Master students

### Publications

- P. Holzer, **T. Psomas** (eds.), "Ventilative cooling sourcebook." IEA EBC Annex 62, Aalborg, Denmark, 2018 (ISBN 87-91606-37-3).
- **T. Psomas**, M.J. Alonso, "Control strategies." (chapter), P. Heiselberg (ed.), "Ventilative cooling design guide." IEA EBC Annex 62, Aalborg, Denmark, 2018 (ISBN 87-91606-38-1).
- **T. Psomas**, P. Heiselberg, K. Duer, M.M. Andersen, "Comparison and statistical analysis of long-term overheating indices applied on energy renovated dwellings in temperate climates." Indoor and Built Environment Journal 27: 423-435, 2018. **Best Paper Award, 2018.**
- P. Holzer, P. Stern, **T. Psomas**, "Ventilative cooling on the test bench. Learnings and conclusions from practical design and performance evaluation." REHVA Journal, 55: 6-12, 2018. <https://www.rehva.eu/publications-and-resources/rehva-journal/2018/032018.html>
- **T. Psomas**, "Ventilative cooling in energy renovated single-family houses in temperate climates.", PhD Thesis, Aalborg, Denmark, 2017 (ISBN (online): 978-87-7112-973-1).
- A. Belleri, M. Avantaggiato, **T. Psomas**, P. Heiselberg, "Evaluation tool of climate potential for ventilative cooling." International Journal of Ventilation 1-13, 2017.
- **T. Psomas**, M. Fiorentini, G. Kokogiannakis, P. Heiselberg, "Ventilative cooling through automated window opening control systems to address thermal discomfort risk during the summer period: Framework, simulation and parametric analysis." Energy and Buildings Journal 153: 18-30, 2017.
- **T. Psomas**, P. Heiselberg, T. Lyme, K. Duer, "Automated roof window control systems to address overheating on renovated houses: Summertime assessment and intercomparison." Energy and Buildings Journal 138: 35-46, 2017.
- **T. Psomas**, P. Heiselberg, K. Duer, E. Bjørn, "Overheating risk barriers to energy renovations of single family houses: Multicriteria analysis and assessment." Energy and Buildings Journal 117: 138-148, 2016.
- **T. Psomas**, P. Heiselberg, K. Duer, E. Bjørn, "Overheating assessment of energy renovations." REHVA Journal, 53: 32-35, 2016. <http://www.rehva.eu/publications-and-resources/rehva-journal/2016/012016/overheating-assessment-of-energy-renovations.html>
- **T. Psomas**, P. Holzer, M. Santamouris, "A naturally ventilated efficient residential building under the impact of climate change." International Journal of Ventilation 13 (2): 169-178, 2014.

## CONFERENCES AND SEMINARS

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### Conferences

- **T. Psomas**, P. Heiselberg, T. Lyne, "Automated window opening control system to address thermal discomfort risk in energy renovated dwellings. Summertime assessment." 38<sup>th</sup> AIVC conference (proceedings), Nottingham, U.K., 2017 (invited keynote speaker).
- P. Holzer, P. Moherndl, **T. Psomas**, "Ventilative cooling on the test bench. Learnings and conclusions from practical design and performance evaluation." 38<sup>th</sup> AIVC conference (proceedings), Nottingham, U.K., 2017.
- **T. Psomas**, "Ventilative cooling solutions and technologies" International Workshop "Ventilative cooling in buildings: now & in the future", Brussels, Belgium, 2017 (invited keynote speaker).
- **T. Psomas**, P. Heiselberg, M. Pomianowski, "Automated window systems vs. mechanical ventilation for renovated houses during summer period." Danvak Nyt fra forskningsfronten på AAU, Aalborg, Denmark, 2016.
- P. Holzer, **T. Psomas**, P. O'Sullivan, "International ventilation cooling application database." 12<sup>th</sup> REHVA world congress (proceedings), Aalborg, Denmark, 2016.
- **T. Psomas**, P. Heiselberg, K. Duer, E. Bjørn, "Control strategies for ventilative cooling of overheated houses." 12<sup>th</sup> REHVA world congress (proceedings), Aalborg, Denmark, 2016.
- **T. Psomas**, P. Heiselberg, "Ventilative cooling in energy renovated residences." BuildSim Nordic (IBPSA Nordic), Aalborg, Denmark, 2015.
- **T. Psomas**, P. Heiselberg, K. Duer, E. Bjørn, "Analysis and comparison of overheating indices in energy renovated houses." 14<sup>th</sup> IBPSA conference (proceedings), Hyderabad, India, 2015.
- A. Belleri, **T. Psomas**, P. Heiselberg, "Evaluation tool of climate potential for ventilative cooling." 36<sup>th</sup> AIVC conference (proceedings), Madrid, Spain, 2015.
- J.M. Hidalgo, **T. Psomas**, C.G. Gafaro, P. Heiselberg, J.A. Millan, "Overheating assessment of a passive house case study in Spain." 36<sup>th</sup> AIVC conference (proceedings), Madrid, Spain, 2015.
- **T. Psomas**, P. Holzer, M. Santamouris, "Impact of climate change on a naturally night ventilated residential building, Greece." 34<sup>th</sup> AIVC conference (proceedings), Athens, Greece, 2013.

### Seminars

Attended accredited seminars and conferences held by the Technical Chamber of Greece, the National Technical University of Athens (Greece), the Imperial College of London (U.K.), the University of Aegean (Greece), the Danube University (Austria), the Aalborg University (Denmark) and various organizations (e.g. Coursera and Udemy web platforms, ASHRAE, CIBSE, REHVA, DANVAK, European Standardization Committee).

## NETWORKS AND MEMBERSHIPS

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### Memberships

- Elsevier, Energy and Buildings International Scientific Journal Reviewer
- Elsevier, Building and Environment International Scientific Journal Reviewer
- Elsevier, Energies International Scientific Journal Reviewer
- Taylor & Francis, International Journal of Ventilation Scientific Journal Reviewer
- SAGE, Indoor and Built Environment International Scientific Journal Reviewer
  
- Member of the Technical Chamber of Greece, 2006-present
- Member of the Association of the Civil Engineers of Greece, 2006-present
- Member of the International Passive House Institute, 2012-2014

## HONOURS AND AWARDS

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### Honours and awards

"Kongresdeltagelse i udlandet."

Otto Mønstedts Fond (December, 2015)

## VOLUNTEER

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### Volunteer

- International Rescue Committee (Lesvos, Greece)
- United Nations High Commissioner for Refugees (Lesvos, Greece)
- Save the Children-Metadrasi Organization (Lesvos, Greece)