

Event:

Energy in Buildings Athens Conference 2026

Date:

Saturday October 24, 2026

Place:

Divani Caravel Hotel Athens, Greece



#	Constantinos A. Balaras Dr Mechanical Engineer, FASHRAE	
Title:	Research Director, Institute for Environmental Research & Sustainable Development, National Observatory of Athens, Greece	
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Presentation title:	How to Assess Resilience of the Built Environment to the Impacts of Climate Change	
There is growing scientific evidence that human activities have been and continue to impact climate change resulting to long-term shifts in temperatures and weather patterns. Buildings and the built environments of our cities have been part of the problem by using large amounts of energy and other natural resources, with major contributions to carbon and greenhouse gas emissions. They are now transforming to become part of the solution by decarbonizing buildings and placing more emphasis on reducing energy use and operational emissions. However, climate change has triggered different adverse and extreme weather events that can affect our buildings and cities, with near- and long-term implications that we must overcome. This presentation will review an innovative method inspired by the IPCC Risk-Centered Framework that accounts for the interaction of Hazard-Exposure-Vulnerability. Tools are also available for supporting experts, stakeholders and local authorities to assess the current state and support efforts to develop, implement and monitor different adaptation measures to the climate change impacts, at building and urban scales. Additional information will be provided on a European standardization effort to develop a pre-CEN standard on this topic. Finally, will also review the available ASHRAE resources on relevant topics.		
Short CV (EN):	Dr Balaras is a mechanical engineer, research director with the Group Energy Conservation at the Institute for Environmental Research and Sustainable Development, in the National Observatory of Athens, Greece. Over 30 years of professional experience and R&D in the area of Renewable Energy Sources -Energy Conservation in buildings and is active on decarbonization of the built environment, sustainability and resilience assessment of buildings-neighborhoods-cities, whole life carbon analysis, and building stock modeling. Participated in over 60 R&D and demonstration projects financed by the European Commission, ministries and the private sector, and has published in over 350 archival journal papers, books and conference proceedings. ASHRAE Fellow, recipient of ASHRAE Louise & Bill Holladay Distinguished Fellow Award, and he has served as Society Vice President and on the ASHRAE Board of Directors as Director-At-Large and as a Director and Regional Chair DRC Region XIV – Europe.	

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Short CV (GR):

Ο Δρ. Κωνσταντίνος Α. Μπαλαράς είναι Μηχανολόγος Μηχανικός, Διευθυντής Ερευνών με την Ομάδα Εξοικονόμησης Ενέργειας στο Ινστιτούτο Ερευνών Περιβάλλοντος & Βιώσιμης Ανάπτυξης του Εθνικού Αστεροσκοπείου Αθηνών. Έχει πάνω από 3 δεκαετίες επαγγελματικής εμπειρίας και έρευνας στον τομέα των Ανανεώσιμων Πηγών Ενέργειας και της Εξοικονόμησης Ενέργειας στα κτίρια, και ασχολείται με θέματα σχετικά με την απανθρακοποίηση του δομημένου περιβάλλοντος, καθώς και με την ανάπτυξη συστημάτων αξιολόγησης της αειφορίας και της ανθεκτικότητας κτιρίων, γειτονιών και πόλεων, ανάλυση κύκλου ζωής και μοντελοποίηση του κτιριακού αποθέματος. Έχει συμμετάσχει σε πάνω από 60 Ευρωπαϊκά & Εθνικά Προγράμματα και συνεργασίες με τον ιδιωτικό τομέα, έχει δημοσιεύσει πάνω 350 εργασίες σε επιστημονικά περιοδικά, βιβλία και συνέδρια. Είναι ASHRAE Fellow, του έχει απονεμηθεί το ASHRAE Louise & Bill Holladay Distinguished Fellow Award, και έχει θητεύσει ως Αντιπρόεδρος της ASHRAE, Director at Large, και Director Regional Chair της Ευρώπης.

CV:

Dr Balaras is a mechanical engineer, research director **with the Group Energy Conservation** at the Institute for Environmental Research and Sustainable Development, in the National Observatory of Athens, Greece. Over 30 years of professional experience and R&D on Renewable Energy Sources -Energy Conservation. Active in the areas of high performance sustainable buildings and decarbonization, sustainability and resilience assessment of buildings-neighborhoods-cities, thermal and solar applications, building energy audits-diagnosis and retrofitting, environmental impact of buildings, solar air-conditioning. Instrumental in the national EPBD transposition efforts. Group activities focus on building typologies (TABULA & EPISCOPE) and Hellenic building stock analysis prioritizing refurbishment actions, collection of real energy consumption data from dwellings and behavioral role of occupants, sustainable and resilient neighborhoods and cities, decarbonization of buildings, operational and embodied energy/carbon intensities, **whole life carbon analysis**. Participated in over 60 R&D and demonstration projects financed by the European Commission, national ministries and organizations, and the private sector, with his research resulting in over 350 archival journal papers, books and conference proceedings. Served on ASHRAE Board of Directors as DAL (2007-10), Society Vice President (2011-13), and DRC Region XIV – Europe (2017-20). ASHRAE Fellow, recipient of ASHRAE Louise & Bill Holladay Distinguished Fellow Award, ASHRAE Andrew T. Boggs Service Award, ASHRAE Exceptional Service Award (ESA), ASHRAE John F. James International Award, ASHRAE Distinguished Service Award (DSA). Member of the Hellenic Technical Chamber as a Professional Engineer. Currently serving on ASHRAE Society Rules Committee, ASHRAE Foundation as a Trustee, ASHRAE Nominating Committee, SPC240P proposed standard for calculating GHG emissions, and several technical committees including TC 2.8 Building Environmental Impacts and Sustainability and TC 6.7 on Solar and Other Renewable Energies.

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