INTERNATIONAL
BUILDING
PERFORMANCE
SIMULATION
ASSOCIATION

Candidates for At-Large Directors – 2025 Elections

Mike Barker

Over the last 15 years, I founded and managed various IBPSA Social Media resources, including three LinkedIn Groups with approximately 20,000 members. I serve on IBPSA's Membership Development and Communication Committees, attended 2 IBPSA Conferences (Glasgow, Chambéry), and helped promote others.

If elected, my goal is to establish a Pan-African IBPSA Chapter in Sub-Saharan Africa. Given the continent's size and rapid growth, it's essential for IBPSA to have a presence here. I believe I can make meaningful progress, starting with the English-speaking countries of Commonwealth Africa.

Controlled Environment Agriculture (CEA) is a multi-billion dollar industry (CAGR 10%) and presents profitable opportunities for Building Physics professionals. Unlike our usual buildings where the focus is on IEQ for humans, this sector, including vertical farming and greenhouse systems, looks at creating optimal conditions for the growth of sensitive plants.

Triggered by the seminal BS2017 paper of Christoph Reinhart et al "Building-Integrated Agriculture In Urban Contexts", I have grown a new IBPSA LinkedIN Group on CEA Design to ~1800 members. If elected, I will work to raise IBPSA's profile and recognition in this emerging field.

Background

With 30 years of experience, my focus has been on Energy Systems and Building Physics for a Sustainable Built Environment.

My work spans Southern and East Africa's sustainable buildings. Includes convention centers, stadiums, and Africa's first LEED Gold Office and Factory for Coca-Cola subsidiary Valpré (2010). Consulted on LEED Certification for Google and Microsoft African head offices.

- BSc (ElecEng) University of Natal, Durban
- USGBC LEED AP (2008)
- BREEAM International Assessor course (BRE Watford 2009)
- Senior IEEE Member
- IEEE PES Technical Committee - Smart Buildings, Loads, and Customer Systems
- IEEE PES SBLC TaskForce - Demand Flexibility Metrics Standardization
- Past Councillor - South African Institute of Electrical Engineers
- ASHRAE / CIBSE (Occasional Member)

Clarice Bleil de Souza

Multidomain Simulations to evidence-based UN Sustainable Development Goals

I am a full Professor at the Welsh school of Architecture, Cardiff University (UK) researching, teaching and supervising students in using simulations for decision making in the built environment from a multidisciplinary perspective. I have been an IBPSA at-large director since 2023, and actively contributing to the IBPSA community. My latest contributions include a Special Issue in the Journal of Building Performance Simulation which I led with Prof. McElroy and Dr. Camilla Pezzica on 'Multi-domain simulation

workflows for sustainable cities and communities (UN SDG 11)' https://www.tandfonline.com/toc/tbps20/18/3?nav=tocList . Currently, I participate on the IEA Annex 91 'Open BIM for Energy Efficient Buildings' contributing to the development of:

1. a workflow of standard information exchange with its associated uncertainties for each design deliverable stage to inform BIM2BEM automation,
2. essential criteria for circular design strategies appropriate to the Global South to be included in BIM libraries, and
3. varying end-user agency in optimizing energy flexibility.

As a member of the JBPS and Building Simulation Journal editorial boards plus BS and BSO conference scientific committees, I have always tried to push the boundaries of the discipline. To this end, I am lately involved with the IBPSA Strategic Planning Committee where I am pushing the community to expand the remit of IBPSA by coupling other types of simulations with the traditional energy, lighting and indoor air quality ones towards the development and implementation of multidomain simulations at different scales. I hope to continue active in the IBPSA board to promote other initiatives of this type, provoking a more active debate in mitigating environmental destruction, climate change and fighting inequalities to better respond to the challenges of a changing climate and the UN sustainable development goals.

Drury B. Crawley

I have been involved in building performance simulation for over 45 years, starting as a university undergraduate with mainframes and punch cards. Building simulation has been a theme throughout my career. While consulting after completing my undergraduate degree, simulation was our key tool for determining how to reduce energy use in a range of new and existing building projects. Building performance simulation was also central to commercial building research and standards activities at a DOE national laboratory. Finally, while at U.S. DOE, I supported the development of building simulation tools, including DOE-2, OpenStudio, Energy-10, and BLAST, among others. I initiated and led the development of EnergyPlus for 15 years.

I have promoted building performance simulation for many years -- I founded and supported the Building Energy Tools Directory at DOE for 15 years. I am a co-author of the EPW, a neutral-format climatic data for building simulation, which today can be easily read by more than 20 simulation programs. In 2015, I co-founded Climate.OneBuilding.org to ensure that climate data was readily accessible. (Climate.OneBuilding.org contains EPW-format data for more than 17,000 locations worldwide). While I was at the DOE, I initiated the development of prototype commercial building simulation models. These are now widely used in research and standards development.

While on the IBPSA board, I have worked to grow IBPSA through new regional affiliates. Since the affiliate development committee formed in 2006, we have had substantial growth -- IBPSA now has 31 regional affiliates representing 45 countries and more than 5,000 members (compared with 2006 with 15 affiliates and 2000 members). I have been an IBPSA at-large Board member since 1998, serving as the Membership and Affiliate

Development Committee Chair; Standards Committee Chair; Secretary; Vice President; and currently, President. In 2024, IBPSA became a co-sponsor of six ASHRAE Standards relating to building performance simulation. I was an at-large Board member of IBPSA-USA from 2013 to 2025, serving as past Treasurer, Vice President, and President (2019-2021). I have participated as a member of the scientific committees of more than 25 Building Simulation and regional conferences.

Christina Hopfe

I am a Chartered Engineer, a Fellow of IBPSA and CIBSE, and a Fellow of the HEA. I am Professor of Building Physics. My expertise covers areas, such as: decision support techniques, including optimization in the design process under the consideration of uncertainties using BPS. I have been teaching modules in BPS and low-carbon modelling for the past 20 years.

I have been involved in a number of roles for IBPSA, including being Director-at-Large since 2014, the IBPSA Newsletter Editor-in-Chief (2011-2021), and a member of the communication committee since 2011. Since 2016, I have also been responsible for the IBPSA modelling competition. In October 2017 I became the chair of the IBPSA communication committee. Most recently, I was co-chair of the Austro-German IBPSA conference BauSIM in 2020. Since September 2024, I have also been the president of IBPSA DACH.

My aspiration for IBPSA is to enhance our collaborations with partner organisations by establishing synergies, but also by avoiding duplication. I see this as an essential part of the development of IBPSA towards becoming more efficient, effective and relevant as an organisation. This will also enable us to build upon our past achievements in line with IBPSA's mission. As part of this, I want to encourage MSc and PhD students to engage with IBPSA and to educate and empower them on aspects related to building performance simulation and modelling.

In my capacity as an At-Large Director during the past years, I have gained a broad understanding of the workings of IBPSA and its affiliates. I would like to continue serving IBPSA via my active engagement on its Board of Directors, specifically to help and engage the younger generation of building performance modellers and to work on aspects related to strengthening equality and diversity within the IBPSA community.

Lori McElroy

Experience:

Throughout my career, I have championed the use of simulation in design practice – initially as a practitioner and later by transferring modelling from research to practice. My current role is Professor of Smart Resilient Cities at the University of Strathclyde in Glasgow, Scotland, where I am focussing on developing a computational approach to design within the Architecture Department through inclusion in undergraduate teaching, CDP and development of a new master's course. I have a PhD in Embedding Simulation in Design Practice.

Contributions:

I joined IBPSA in 1997, as a founder member and Affiliate representative of IBPSA Scotland. I am an IBPSA Board member, have Chaired the Awards Committee; was Secretary from 2009 until 2015. I am currently a member of the Awards and Fellows Committee, the Projects Committee, The ED&I Committee and the Membership & Affiliate Development Committee.

I co-chaired BS2009 in Scotland, became IBPSA Vice President in 2015 and Chair of the IBPSA Development Committee, working to consolidate a sustainable future for IBPSA. I was President from 2018 – 2022 and I am the immediate Past-President of IBPSA.

Aspirations:

Simulation is key to delivering a better built environment and improving people's lives, as only simulation can predict how a building might perform in practice. Simulation is a rapidly expanding field that is accessible to all with an interest in building performance and wider environmental and societal concerns, but we need to work harder to include human needs and aspirations – going well beyond technical solutions.

I would continue to promote and work towards greater inclusivity and diversity on the Board, with more contributors actively participating.

My goal is to work with IBPSA Members to make IBPSA **the** go to organisation and recognised authority on simulation worldwide.

Robert McLeod

My experience in building performance simulation spans over 20+ years working both in industry and academia. I currently hold two positions, one as a Full Professor of Building Physics and Sustainable Design at TU Graz, Austria and the other as an Associate at the Building Research Establishment (BRE) where I have worked for over 18 years. I have a PhD in Building Physics from Cardiff University, Wales and I am a Chartered Engineer (CEng), a Fellow of the Institute of Mechanical Engineers (FIMechE), a Certified European Passivhaus Designer (CEPHD), and a Fellow of the Higher Education Academy (FHEA).

I have been a member of IBPSA England since 2014 and previously held the position of Vice Chair of IBPSA-England (2016–2020). In this position I played a fundamental role in establishing IBPSA England as a registered Community Interest Company (CIC); for which I received the 'Outstanding Contribution' award at the Building Simulation & Optimization (BSO) conference of IBPSA England in 2020. In addition to this, I previously held the position of Research Chair, of the ASHRAE Midlands, UK Chapter from 2017–2019.

Since 2021 I have been the Chair of the Equality, Diversity and Inclusion (ED&I) committee of IBPSA World Board. In this role I have helped to create a more inclusive environment for IBPSA's diverse global membership by progressively embedding best practice in ED&I throughout the organisation. This includes developing an ED&I action plan and mission statement (including best practice guidelines for conferences and events) and most recently collaborating in the development of the IBPSA Women's Network, which will be launched at BS25 in Brisbane. I was appointed as Scientific Chair of BS27,

which will be held in Vienna Austria. I was first elected as Director-at-Large in 2024 and I am standing for re-election because I have the drive and commitment to continue making a positive contribution to the future of IBPSA.

Yiqun Pan

My dedication to the IBPSA community is constant. Since 2007, I've attended every BS conference and four USA SimBuilds. An IBPSA Fellow since 2017, I serve on the JBPS Editorial Board (recently spearheading a Special Issue on "Multi-source data integration to digital world modeling") and the IBPSA Conference Committee. My past role as Vice-President of IBPSA-China also allowed me to organize many impactful workshops and seminars.

I've found immense satisfaction in contributing to IBPSA's global reach, chairing the inaugural ASim2012 in Shanghai, which kicked off our Asian conference series, and more recently, co-chairing the successful BS2023 in Shanghai with Prof. Da Yan (Tsinghua University), an event that truly fostered international bonds. Mentoring future generations is a particular joy; I've guided Tongji University students in past BS modeling competitions and am currently instructing the Carnegie Mellon University (CMU) team for the BS2025 student competition.

Today, as a Special Faculty Member at CMU's School of Architecture, I'm dedicated to teaching building science and simulation. My commitment to cutting-edge research continues as an Affiliate Visiting Professor at Lawrence Berkeley National Laboratory (LBNL), tackling critical issues of energy burden and community resilience. This builds upon my extensive prior academic career at Tongji University, where I led over 30 research projects and developed impactful tools like VisualEPlus (with LBNL) and a co-simulation model for DeST3.0, contributing to the knowledge base reflected in my 120+ papers and two books on Building Performance Simulation.

Looking ahead, if elected as an At-Large Director for 2025-2027, I am enthusiastic about dedicating my diverse international experience to the Board. My commitment would be to champion even greater global collaboration within IBPSA, actively enhance our knowledge exchange, spearhead efforts in innovative research, and tirelessly work to expand IBPSA's vital impact across academia and industry for a sustainable and resilient built world.

Gülsu Ulukavak Harputlugil

I stand for election as At-large Director of IBPSA. I have been an Affiliate Representative for 7 years and now would like to continue and expand my role. My aspiration is to represent the wider Middle East on the Board, developing further connections with this region. I also am keen to promote the use of simulation in architectural design, particularly when applied to architectural design education. As At-Large Director I would also further strengthen the equality and diversity of the IBPSA Board.

I am a full professor at Çankaya University Architecture, Türkiye. My scholarly interest covers energy efficient building design, net zero energy/carbon/water buildings, performance evaluation and building simulation. My research has been focused on performance evaluation techniques (particularly BPS) improvement of performance

evaluation during the design process and exploring integration possibilities of performance simulation tools into the design process. Since 2015, I have also explored the impact of occupant behaviour on energy consumption of dwellings, renovation strategies of current building stock and climate change adaptation strategies for buildings and communities.

I was introduced to IBPSA during a stay with the building simulation group of Professor Jan Hensen at TU Eindhoven back in 2005. Since then, I have contributed to most international Building Simulation papers through papers, reviews and presentations. Further volunteer contributions to IBPSA are as follows: I was founding chair of IBPSA Turkiye (2017-2021) and then vice-chair (2021-2024). During this time, I have organized 3 IBPSA-Turkiye seminars as well as an IBPSA Turkiye special session at the TTMD conference in 2020. I have been Affiliate Representative and IBPSA Board member from 2018 to 2025. I have led two bids to host the international Building Simulation conference in Istanbul. I am presently a member of the IBPSA Conference Committee; IBPSA Equality, Diversity and Inclusivity Committee and Strategic Planning Committee.

Liangzhu Leon Wang

Next-Gen Building Performance Simulations for the Climate-Resilience and AI Eras

Facing the twin challenges of climate change and the AI revolution, I am committed to advancing IBPSA's global leadership in shaping next-generation building performance simulations that are scientifically rigorous, policy-relevant, AI-integrated, and code-impactful.

As an IBPSA and ASHRAE Fellow, my career has focused on transforming cutting-edge research into real-world standards and global impacts. My work has directly informed ASHRAE Standards 90.1, 189.1, AMCA COVID guidelines, US CDC and CPSC regulations, California Title 24, IECC, Canada's National Building Code, Standards Council of Canada, and Health Canada—demonstrating how simulations can shape policy, health, and resilience at scale. My tools have advanced modeling of airflow, aerodynamics, infection risk, and indoor and urban microclimates. My research contributions towards the SOTA building simulations were cited in the Nature Feature Article and contributed to national and international ventilation guidance. I was selected as one of 50 global experts for the Royal Academy of Engineering's Technical Advisory Group, contributing to the global review of engineering responses to COVID-19.

I have served IBPSA through editorial leadership (JBPS, Building Simulation, Energy and Buildings, Building and Environment, Wind Engineering, Indoor Environments), major conference organizations (Chair of COBEE 2022, Co-Chair of DBMC 2026, and Scientific Committee Chair of eSim 2026), and global academic-industry collaborations. I have led over $16.5M in interdisciplinary projects, including Canada's CFREF "Electrifying Society" and IEA Annexes representing Canada.

I envision IBPSA's next phase reinforcing ties with international associations, national research bodies, and code organizations—making building simulation indispensable for policy, health, and climate resilience. I will advocate for stronger scientific-industry integration, global equity in simulation access, and cutting-edge AI-enhanced methods under the IBPSA banner.

I would be honored to serve as your At-Large Director and help lead IBPSA into its next-generation era of global impact.

Wangda Zuo

I am honored to stand for election as an At-Large Director on the IBPSA Board. Since 2016, I have served as both the Treasurer of IBPSA and the IBPSA-USA Representative, playing a central role in maintaining IBPSA's financial health and fostering strong communication between IBPSA-World and its U.S. affiliate. My Treasurer responsibilities include managing tax filings, preparing annual financial reports and budgets, and conducting international payments and fund transfers—ensuring seamless global operations and financial stability of IBPSA.

I am an IBPSA Fellow and recipient of the IBPSA-USA Outstanding Researcher Award and Emerging Professional Award. I founded the IBPSA-USA Research Committee and served as its inaugural chair, creating a collaborative forum that has supported research advancement across the community. More recently, I helped launch the IBPSA-USA Penn State Chapter and serve as the faculty advisor to expand student and local participation.

My research contributions include serving as a lead developer of the open-source Fast Fluid Dynamics (FFD) model for indoor airflow simulation and as a key contributor to the open source Modelica Buildings Library for building energy and control systems. I have published over 160 peer-reviewed papers and supervised more than 20 Ph.D. students, many of whom are now active in the building simulation field.

I have also supported IBPSA's mission through conference service, including as a Scientific Committee member for SimBuild 2020 and 2022, and as a frequent session chair and reviewer for both SimBuild and Building Simulation conferences. These experiences have deepened my commitment to high-quality technical exchange and global collaboration.

If elected, I will continue to advocate for open-source innovation, mentorship, and outreach. I am committed to serving the IBPSA community with the same dedication and integrity I have shown the past decade.

Thank you very much for your consideration and support.