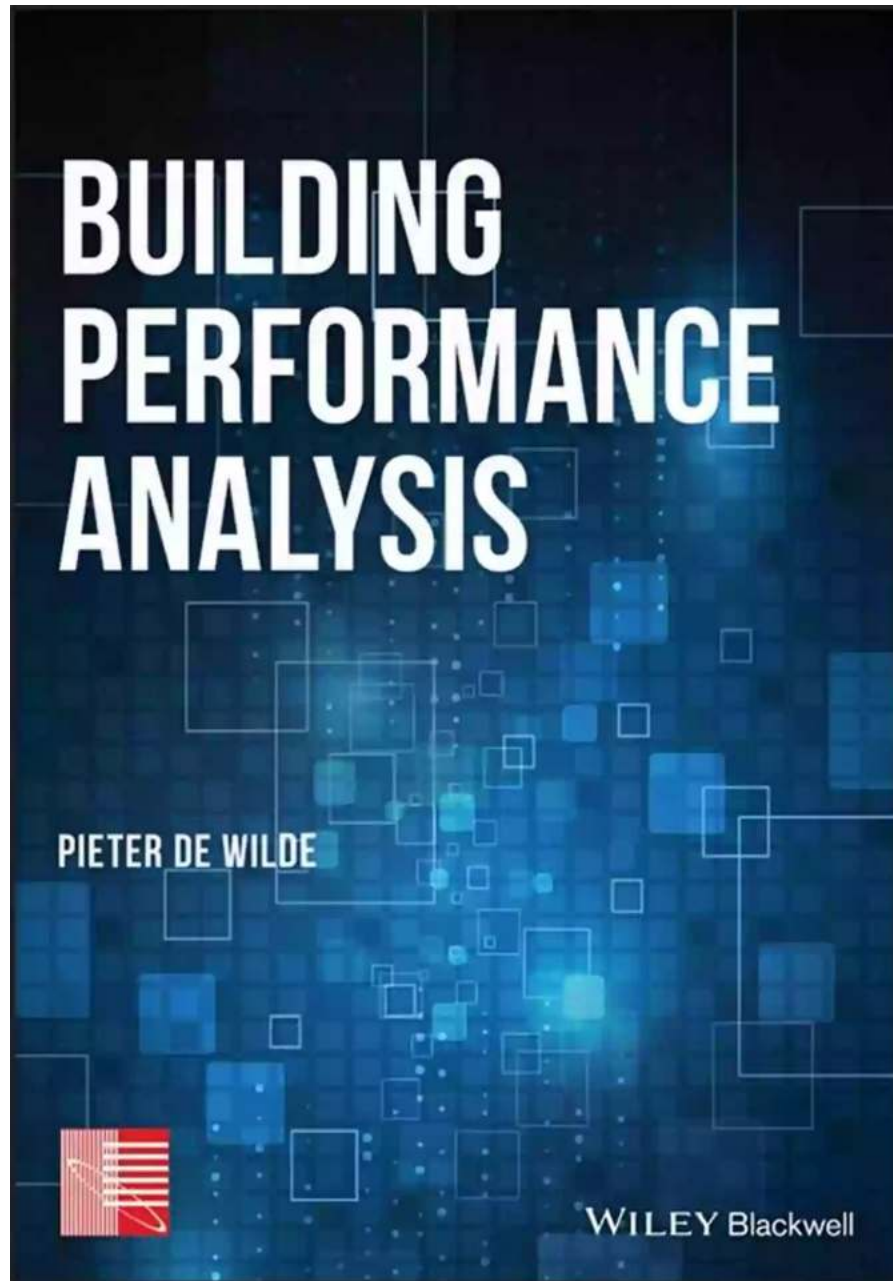


The Power of Building Performance Analysis: Pieter De Wilde's Insights

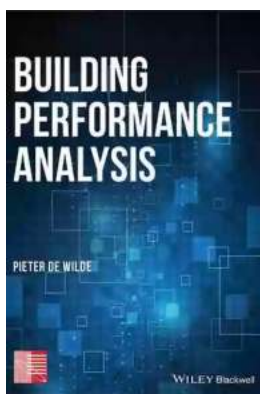


In today's world, where sustainable design and energy efficiency are becoming increasingly important, building performance analysis plays a crucial role in optimizing the performance of buildings. One person who has made significant

contributions to this field is Pieter De Wilde, a renowned expert in building performance analysis and sustainable building design.

Who is Pieter De Wilde?

Pieter De Wilde is a professor of Sustainable Building Design at the University of Plymouth in the United Kingdom. With over two decades of experience in the field, he has become a leading authority on building performance analysis and its integration into sustainable design practices.



Building Performance Analysis

by Pieter de Wilde(1st Edition, Kindle Edition)

★★★★☆ 4.5 out of 5

Language : English

File size : 14534 KB

Text-to-Speech : Enabled

Enhanced typesetting : Enabled

Print length : 592 pages

Lending : Enabled



De Wilde's passion for sustainable architecture and building performance analysis stemmed from his belief that buildings should not only provide comfortable living spaces but also minimize their impact on the environment. Through his research and innovative approaches, he has been able to transform the way buildings are designed, constructed, and operated.

What is Building Performance Analysis?

Building performance analysis refers to the process of evaluating the performance of a building's design, construction, and operation to ensure optimal energy efficiency, occupant comfort, and environmental sustainability. By utilizing

advanced simulation techniques, data analysis, and modeling, professionals like Pieter De Wilde can assess the building's performance across various parameters.

The analysis includes factors such as energy consumption, thermal comfort, daylighting, acoustics, indoor air quality, and carbon emissions. By analyzing these elements, architects, engineers, and designers can identify areas for improvement and implement strategies to enhance the overall performance of the building.

Contributions and Innovations by Pieter De Wilde

Pieter De Wilde's work has resulted in several key contributions and innovations in the field of building performance analysis:

- 1. Development of Advanced Simulation Tools:** De Wilde has been instrumental in developing advanced simulation tools that allow architects and engineers to model and analyze building performance more accurately. These tools enable the assessment of factors such as energy consumption, solar heat gain, and natural ventilation, among others.
- 2. Integration of Building Performance Analysis into BIM:** De Wilde emphasizes the importance of integrating building performance analysis into Building Information Modeling (BIM) workflows. By incorporating performance analysis from the early design stages, architects can make informed decisions that result in more sustainable and efficient buildings.
- 3. Advancement of Occupant Comfort:** De Wilde's research focuses on improving occupant comfort within buildings. By evaluating factors such as thermal comfort, indoor air quality, and acoustics, he has helped architects create healthier and more comfortable indoor environments.

Why Building Performance Analysis Matters

Building performance analysis is integral to creating sustainable and energy-efficient buildings. Its significance can be understood through the following key points:

- **Resource Conservation:** By optimizing energy consumption and reducing carbon emissions, building performance analysis helps conserve valuable resources and mitigates the impact of buildings on climate change.
- **Cost Savings:** Analyzing a building's performance can identify potential energy wastage and inefficiencies, leading to cost savings in the long run through reduced energy consumption.
- **Improved Occupant Health and Well-being:** Building performance analysis ensures that indoor environments are comfortable, healthy, and conducive to the well-being of occupants. Proper ventilation, thermal control, and lighting contribute to enhanced productivity and overall satisfaction.
- **Regulatory Compliance:** Many governments and organizations have set guidelines and regulations for sustainable building design and performance. Building performance analysis helps architects and building professionals meet these requirements and achieve compliance.

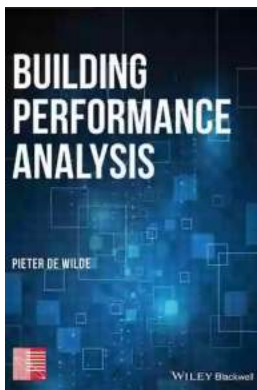
The Future of Building Performance Analysis

As the world moves towards a more sustainable future, the role of building performance analysis becomes increasingly important. Pieter De Wilde believes that the evolving field will continue to witness new technologies and advancements, allowing for more accurate predictions and analysis of building performance.

With the integration of concepts like machine learning, IoT (Internet of Things), and big data analytics, building performance analysis will become more sophisticated and accessible. This will enable architects and designers to create buildings that align with environmental goals, minimize resource consumption, and prioritize occupant well-being.

Pieter De Wilde's expertise and contributions to building performance analysis have undoubtedly revolutionized the way buildings are designed and operated. His work showcases the importance of considering sustainability and energy efficiency throughout the entire building lifecycle.

As the world faces pressing environmental challenges, it is crucial to prioritize building performance analysis to create buildings that mitigate climate change, conserve resources, and provide healthier indoor environments. With experts like Pieter De Wilde leading the way, the future of sustainable building design looks promising.



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Explores and brings together the existent body of knowledge on building performance analysis

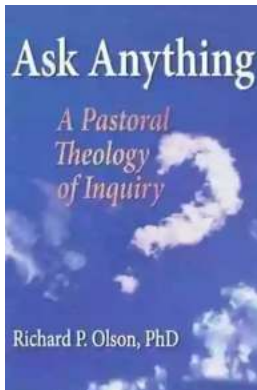
Shortlisted in the CIBSE 2020 Building Performance Awards

Building performance is an important yet surprisingly complex concept. This book presents a comprehensive and systematic overview of the subject. It provides a working definition of building performance, and an in-depth discussion of the role building performance plays throughout the building life cycle. The book also explores the perspectives of various stakeholders, the functions of buildings, performance requirements, performance quantification (both predicted and measured), criteria for success, and the challenges of using performance analysis in practice.

Building Performance Analysis starts by introducing the subject of building performance: its key terms, definitions, history, and challenges. It then develops a theoretical foundation for the subject, explores the complexity of performance assessment, and the way that performance analysis impacts on actual buildings. In doing so, it attempts to answer the following questions: What is building performance? How can building performance be measured and analyzed? How does the analysis of building performance guide the improvement of buildings? And what can the building domain learn from the way performance is handled in other disciplines?

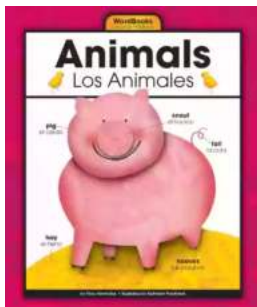
- Assembles the current body of knowledge on building performance analysis in one unique resource
- Offers deep insights into the complexity of using building performance analysis throughout the entire building life cycle, including design, operation and management
- Contributes an emergent theory of building performance and its analysis

Building Performance Analysis will appeal to the building science community, both from industry and academia. It specifically targets advanced students in architectural engineering, building services design, building performance simulation and similar fields who hold an interest in ensuring that buildings meet the needs of their stakeholders.



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