**BUILDING ENERGY AND ENVIRONMENT JOURNAL**

**MANUSCRIPT TEMPLATE**

[MANUSCRIPT TITLE IN TITLE CASE - BOLD, CENTERED]

*Subtitle if applicable (italic, centered)*

Author Name¹, Author Name², Author Name³\*

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**ABSTRACT**

The abstract should provide a comprehensive summary of the research in 250-300 words, structured as follows: Background - Brief context and problem statement; Objective - Clear research aims and scope; Methods - Key methodological approaches and tools used; Results - Main findings and outcomes; Conclusions - Significance and implications of the study. The abstract should be self-contained and accessible to readers from different disciplines within building energy and environmental fields.

**Keywords:** 4-6 specific terms separated by semicolons; building energy; environmental performance; sustainable design

**1. INTRODUCTION**

The introduction should establish the research context and significance within building energy and environmental performance. This section should include:

* Problem Statement: Clear identification of the research gap or challenge
* Literature Review: Critical analysis of relevant previous work and current state of knowledge
* Research Objectives: Specific, measurable goals of the study
* Research Questions/Hypotheses: Clear statements of what the study aims to answer
* Scope and Limitations: Boundaries and constraints of the research
* Paper Structure: Brief overview of subsequent sections

**2. LITERATURE REVIEW (if separate from Introduction)**

Comprehensive review of relevant literature organized thematically, highlighting:

* Current state of knowledge
* Research gaps and controversies
* Theoretical frameworks
* Connection to current study

**3. METHODOLOGY**

**3.1 Research Design**

Clear description of the overall research approach (experimental, simulation, case study, etc.)

**3.2 Materials and Equipment**

Detailed specification of:

* Building materials studied
* Measurement instruments and their specifications
* Software tools and simulation programs
* Calibration procedures

**3.3 Experimental/Analytical Procedures**

Step-by-step description of:

* Data collection methods
* Testing protocols
* Simulation parameters and assumptions
* Quality control measures

**3.4 Data Analysis**

Statistical methods, analysis software, and validation approaches used

**4. RESULTS AND ANALYSIS**

**4.1 [Specific Result Category]**

Present results logically and systematically using appropriate visual aids.

**4.1.1 Tables**

Tables should be numbered consecutively and have descriptive titles above the table.

**Table 1: Energy performance comparison of different roof configurations**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Roof Type** | **Orientation** | **Tilt Angle (°)** | **Energy Consumption (kWh/m²/year)** | **Solar Gain (W/m²)** |
| Gable | E-W | 15 | 125.3 | 245.7 |
| Gable | N-S | 30 | 118.9 | 267.2 |
| Hip | E-W | 45 | 132.1 | 223.4 |

Note: Data collected over 12-month period under standard conditions

**4.1.2 Figures**

Figures should be numbered consecutively with descriptive captions below.

Figure 1: Monthly energy consumption patterns in case study building

[High-quality image with clear labels, legends, and units]

Figure 2: Thermal comfort zones analysis using adaptive comfort model

[Professional diagram or graph with proper scaling and annotations]

**4.1.3 Equations**

Mathematical expressions should be centered and numbered:

I\_sun = I\_sn × cos ω (1)

Where:

I\_sun = irradiance from direct sun radiation on tilted roof surface (W/m²)

I\_sn = solar normal radiation (W/m²)

ω = angle of incidence of sun rays onto roof surface (degrees)

**4.2 Statistical Analysis**

Present statistical significance, confidence intervals, and validation results.

**4.3 Sensitivity Analysis**

Discussion of parameter sensitivity and uncertainty analysis where applicable.

**5. DISCUSSION**

**5.1 Interpretation of Results**

Analysis of findings in context of:

* Research objectives
* Existing literature
* Theoretical frameworks
* Practical implications

**5.2 Comparison with Previous Studies**

Critical comparison with relevant published work, highlighting agreements, discrepancies, and explanations.

**5.3 Practical Implications**

Discussion of:

* Design recommendations
* Policy implications
* Economic considerations
* Environmental impact

**5.4 Limitations and Uncertainties**

Honest assessment of study limitations and their potential impact on conclusions.

**6. CONCLUSIONS**

**6.1 Key Findings**

Bullet points summarizing main conclusions directly related to research objectives.

**6.2 Contributions to Knowledge**

Clear statement of novel contributions to the field.

**6.3 Future Research Directions**

Specific recommendations for follow-up studies and research needs.

**7. ACKNOWLEDGMENTS**

Recognition of funding sources, institutional support, and significant contributions from individuals not listed as authors.

Funding: This research was funded by [Grant Agency] under grant number [XXX].

**8. REFERENCES**

References should follow APA 7th edition style, listed alphabetically by author's last name:

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**FORMATTING GUIDELINES**

* Font: Times New Roman, 12pt for body text, 14pt for headings
* Spacing: 1.5 line spacing throughout
* Margins: 2.5cm on all sides
* Page numbers: Bottom center
* File format: Microsoft Word (.docx) and PDF
* Length: Typically 6,000-8,000 words including references
* Figures: High resolution (minimum 300 DPI) in separate files
* Units: SI units throughout with consistent notation