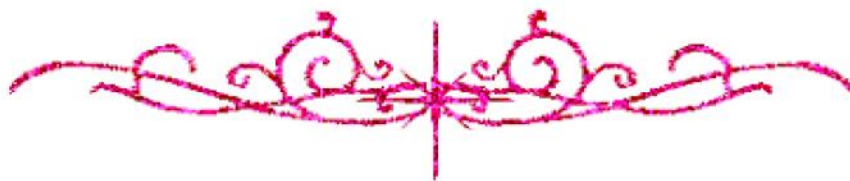


بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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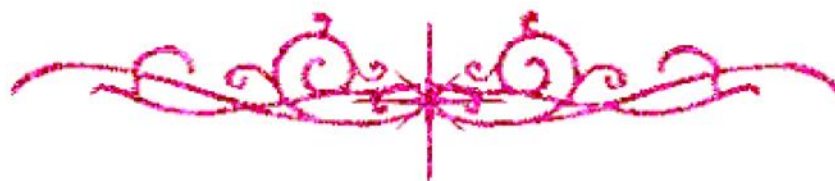


بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل





Ain Shams University
Faculty of Engineering
Architecture Department

**Methodology for Integrating Bio-mimicry Principles
with Bio-philic Design Patterns and Its Application
In Office Buildings**

THESIS

Submitted in Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN ARCHITECTURE

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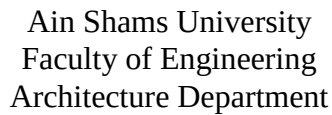
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Declaration

Declaration

"I, [Basem Shaker Mohamed Elsayed], declare that the Master Thesis entitled [Methodology for Integrating Bio-mimicry Principles with Bio-philic Design Patterns and Its Application in Office Buildings] including quotes and exclusive of tables, figures, appendixes, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work"

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Acknowledgment

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Curriculum Vitae

Curriculum Vitae

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List of Acronyms

(SBS) - Sick Building Syndrome

(Heat Island Effect) - HIE

(IEQ) - Indoor Environmental Quality

(IAQ) - Indoor Air Quality

(LEED) - Leadership in Energy and Environmental Design

(SAD) - Seasonal Affective Disorder

(NZEB) - Nearly Zero Energy Buildings

(ASHRAE) - American Society of Heating, Refrigerating and Air-Conditioning Engineers

(BMS) - Building Management System

(SMPS) - Soft Modular Pneumatic System

(SMA) - Shape Memory Alloy

(PCM) - Phase Changing Material

(EAPs) - Electro Active Polymers