

**APPLICATION OF ACOUSTICS TREATMENT TECHNIQUES IN THE  
DESIGN OF AN ANGLICAN CATHEDRAL, ABUJA**

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**(15CA03318)**

**SEPTEMBER, 2021**

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DESIGN OF AN ANGLICAN CATHEDRAL, ABUJA**

**BY**

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**DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE  
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NIGERIA**

**SEPTEMBER, 2021**

## ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of the degree of Master of Science [M.Sc.] in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Nigeria and has been accepted by the School of Postgraduate Studies, Covenant University, Ota, Ogun state.

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(Dean, School of Postgraduate Studies)

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## **DECLARATION**

I, **ADEMO, JOHN ADEOLA (15CA03318)** declares that this research was carried out entirely by me under the supervision of Dr. Anthony B. Sholanke of the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun, Nigeria. I attest that the dissertation has not been presented, either wholly or partially, for any degree elsewhere. All sources of data and scholarly information used in this dissertation are duly acknowledged.

**ADEMO, JOHN ADEOLA**

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Signature & Date

## **CERTIFICATION**

We certify that this dissertation titled “**APPLICATION OF ACOUSTICS TREATMENT TECHNIQUES IN THE DESIGN OF AN ANGLICAN CATHEDRAL, ABUJA**” is an original research work carried out by **ADEMO, JOHN ADEOLA (15CA03318)** in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria under the supervision of Dr. Anthony B. Sholanke. We have examined and found this work acceptable as part of the requirements for the award of Master of Science in Architecture.

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## **DEDICATION**

This thesis is dedicated to the Almighty God, the one who imparted wisdom and understanding graciously to me.

To my adored parents, Arc. And Mrs. Ademo, in conjunction with family and friends, for the support and assistance in all variations.

And finally, to Cathedrals and churches alike whose congregants struggle with a sub-standard listening experience, there is better acoustics at the end of this tunnel.

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## **ABSTRACT**

Cathedrals have existed for so long as the liturgical seats designated for presiding bishops. Previous studies showed the existence of challenges in the acoustics of Cathedrals. Therefore, this study investigated the acoustical treatment techniques used in enhancing users' listening experience in selected Cathedrals with a view to apply its features in the design of an Anglican Cathedral in Abuja, Nigeria. The scope of this study was limited to listening experience as a perception of sound quality. The study area was limited to Abuja and the units of data collection were selected using specific selection criteria. The study adopted both qualitative and quantitative research approaches. Data were gathered with the aid of literature review, observation guide and structured questionnaire. Qualitative data were content analysed and quantitative data were analysed using Statistical Products and Service Solutions (SPSS) software. The results were presented with the aid of tables, photographic materials, architectural drawings, 3D visualisations and an animation. Findings from the study connote that the acoustics treatment techniques found in the examined cathedrals did not conform with known acoustic treatment techniques. This also corresponded with the significant number of dissatisfied users in the examined cathedrals. The study contributed to knowledge by designing an Anglican Cathedral using acoustics treatment techniques that were found to enhance listening experience. A recommendation for further research; design of a Concert Hall for Maximum Satisfaction by Users', Nigeria.

**Keywords:** Acoustics Treatment Techniques, Anglican Cathedral, Listening Experience