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**"Architecture is a wonderful expression of the discovery
process. It's like a scientist who doesn't know the answer,
but knows the path to it. That's what drives me: the joy
of the path, the discovery."**

**Glenn Murcutt Architect, winner of the 2002
Pritzker Architecture Prize**

**"The publication of this book was financed by the Hassan 1er University
fund for scientific research. "**

**L'évaluation de l'effet de
la variabilité spatiale sur
le comportement des
ouvrages.**

{Murs de soutènement}

*...A My BENACHIR
Nouhaila .*

Dedication

I dedicate this modest work to my dearest parents, the first ones who encouraged and supported me during this long way.

Thanks

"Praise be to GOD, lord and master of the universes".

I would like to express my thanks to a whole world of people who have made this study possible and who have contributed to its elaboration in any form.

I address myself to GOD, the almighty, to thank him for having given me the courage, the support, the patience to carry out this work.



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AMÉLIORATION DES PERFORMANCES ÉNERGÉTIQUES DE L'ENVELOPPE DES BÂTIMENTS À L'AIDE DES MATÉRIAUX À CHANGEMENT DE PHASE

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DOCTORAT EN PHYSIQUE INGÉNIERIE : SCIENCES POUR
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BY BENACHIR NOUHAILA

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