

## ACKNOWLEDGEMENTS

It is with a deep sense of gratitude that I submit my humble acknowledgement to my guide and mentor **Prof. Dr. S.S.K. Marthandam M.B., B.S., D. Orth, M.S., Orth.,** *Professor and Head of the Department Of Orthopaedic Surgery, Director, Accident and Emergency Medicine Department, Sri Ramachandra Medical College And Research Institute. (Deemed University)*, whose meticulous talent, patience and boundless enthusiasm has helped me to complete this thesis work successfully. **I acknowledge he brought this technique to this Institution and I learnt it from him.** His Philosophy- unless you know to manage your complications do not operate.

With a feeling of reverence to my respected co-guide **Dr. T. Parvathaleswara Sastry Ph. D.,** *Scientist, Director, Bioproducts, Central Leather Research Institute, Adayar, Chennai*, take this opportunity to express my deepest sense of gratitude and indebtedness to him. Without his personal care constant inspiration and continuous encouragement, this work would not have been possible. **The chapter –Ossification study is completely his brainchild.**

With a sense of gratitude I submit my humble acknowledgement to **Prof. Dr. R. Krishna Kumar B.E., M.E., Ph.D.,** *Professor of Mechanical Engineering, Indian Institute of Science, Madras*, whose superb skill, talent and boundless enthusiasm has helped me to complete this work successfully. **Without him the work on Finite element analysis would not have been possible.**

I sincerely thank **Prof. Dr. S Rangaswamy, M.S., M.Ch,** Dean, Gulf Medical College, Ajman, UAE, formerly Prof. and HOD, Dept. of Orthopaedic Surgery, SRMC &RI, Chennai, who had been guiding and reviewing this work from the beginning to the end and his encouragement helped me to complete.

I sincerely thank **Prof.T.K.Parthasarathy, MD, AB, FRCS,** Pro Chancellor for his invaluable support and guidance throughout my work for this thesis

My sincere and heart felt thanks to **Prof. Dr. S. Thanikachalam M.D., D.M., D.Sc.,** *Vice- Chancellor, SRMC &RI, Director Cardiac Care Centre,* for his encouragement to complete this work.

My sincere thanks to **Prof. Dr. G. Gnanaprakasam, M.S., F.I.C.S.,** *Academic Director, SRMC&RI,* who had been always there our guide by our side to do Our Best.

I extend my sense of gratitude to **Prof. Dr. K. V. Somasundaram. M.D.,** *Dean of Faculties, SRMC & RI,* for his guidance and suggestions.

I thank the **ethics committee** for granting me permission to carry out clinical studies in SRMC & RI campus.

My sincere thanks to **Prof. Dr. Vijayalakshmi Thanasekaran, MD,** *Controller of Examination, SRMC & RI,* and **Smt. Mallika Jacob,** *Deputy Registrar,* who had been constantly guiding this work.

My sincere thanks to **Prof. Dr. T. Subramaniam, M.S., F.R.C.S.,** who taught me to think ‘what next?’

My sincere thanks to **Dr. V. Rajagopalan, M.B., B.S.,** Who taught me ‘identify the structure before you cut.’

My sincere thanks to **Prof. Dr. S. Soundrapandian, M.S., (Gen), M.S., (Ortho)** for his valuable guidance to enter into the world of Orthopaedic Surgery.

My sincere thanks to **Prof. P.V.A. Mohandas M.S., (Ortho), M.Ch,** from whom I learnt –‘organization of thoughts and hard work’ can take you forward.

My sincere thanks to **Prof. Dr. M. Subramaniam, M.S., (Ortho),** whose valuable support helped me to cross difficult times.

I thank all my Family members, Wife, Mrs. C. Prasanna for understanding my long working hours, my son C. Anantha Venkat, who taught me computer, my daughter C.Poovai Mahalakshmi, who contributed her help in my computer working.

I am highly indebt to my Parents, Sri. N. Annamalai and Smt. A. Meenambal for their support and blessing.

My humble thanks to all the patients who are in this study from whom I have learnt this SCIENCE, and helped me to contribute this WORK.

My sincere thanks to my Colleagues, Dr. V.S. Kumar, Dr. K. Mohanasundaram, Dr. Nobin Kumar Chettri, Dr. Karthick Kailash, and post graduates Dr. Dhamodharan, Dr. V. Sathyanarayana, Dr. N. Raj Kumar, for their help in follow up and searching reference and Mr. E. Sentilkumar of IIT, Madras - who helped to make finite element analysis and made it possible to complete this work.

I remember Mrs. Elisabeth Piffel, Feldkirch, Voralberg, Austria, for showing 'save the nature for the future.'