Numerical Solution of Darcy's Law with Memory

Jagath K Wijerathna

Ph.D Thesis of the joint research carried out at the Department of Mathematics, University of Colombo, Sri Lanka and Department of Mathematics, University of Kaiserslautern, Germany.

1. Supervisor: Prof. Dr. H. Neunzert
University of Kaiserslautern
Germany

1. Supervisor: Dr.Meth Devendra
University of Kelaniya
Sri Lanka

2. Supervisor: Prof.P.W.Epasinghe
University of Colombo
Sri Lanka

493083

2000

2000

I express my deep gratitude to Prof. Dr. H. Neunzert and Dr. Meth Devendra for suggesting the interesting problem, the invaluable guidance, providing the right atmosphere, the patient perusal of the write-up and the constant encouragement throughout the preparation of this dissertation. Also I express my deep gratitude to Prof. P.W.Epasinghe for motivative encouragement and interesting discussions throughout my academic life.
I also want to thank Prof.Dr.Axel Klar and Prof.Dr.Jens Struckmeier for their suggestions and discussions during my work. I express my gratitude to the authorities of DAAD (German Academic Exchange Service) for providing me the fellowship, also to the members of the AG Technomathematik, University of Kaiserslautern for necessary facilities to carry out my dissertation. I am grateful to the authorities of Colombo University, Sri Lanka for granting me the study leave to prosecute my studies.

Finally, I express my deep sense of gratitude to my wife Roshini for her patience, the constant encouragement and moral support.