

## Curriculum Vitae

Budhi Arta Surya was born on 12 May 1974 in Padang, West Sumatra, Indonesia. He finished his high schools in Padang. He went to Bandung, West Java, to pursue his university education at the Institute of Technology Bandung in 1993. Four years later, he completed his bachelor degree with distinction (*cum laude*) majoring in Applied Mathematics with a final project entitled “Chapman-Kolmogorov equations and analysis of stock price fluctuations” written under supervision of Prof. dr. Sunardi Wirjosudirjo. In the following year, he was accepted a full scholarship granted by KNAW (The Royal Netherlands Academy of Arts and Sciences) to pursue his master degree in Mathematical Sciences at the University of Twente, the Netherlands, which he finished in June 2000 with a master thesis on “Estimation of stochastic volatility in the Hull-White framework using nonlinear filtering” written under supervision of Prof. dr. Arun Bagchi. In August 2000, he joined the Mathematical Research Institute (MRI) as a master class student in Mathematical Finance Programme which he successfully completed in June 2001 with a test-problem entitled “Backward stochastic differential equations and their applications to hedging and portfolio optimization problems under transaction costs” which was written under supervision of Dr. ir. Michel Vellekoop. As a result of the Master Class Programme, he received in September 2001 a Dutch master degree (*Ingenieur*) in *Toegepaste Wiskunde* (Applied Mathematics) from the University of Twente. In February 2003, he started his PhD study under supervision of Dr. Andreas Kyprianou at the Department of Mathematics of the University of Utrecht, the Netherlands. During his PhD study he was actively involved in taking part of seminars, workshops in Lisbon, Manchester, Edinburgh, Eindhoven, Nijmegen, Lunteren, and Enschede, and giving a number of tutorial classes in Utrecht. His PhD study is resulted in this thesis.