

We approve the thesis of Rimas Adnan Zrae

Date of signature



Dr. Mohamed Hassan  
Assistant Professor  
Department of Electrical Engineering  
Thesis Advisor

13/6/2011



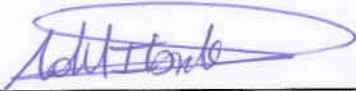
Dr. Mohamed El-Tarhuni  
Associate Professor  
Department of Electrical Engineering  
Thesis Advisor

13/6/2011



Dr. Taha Landolsi  
Associate Professor  
Department of Computer Science & Engineering  
Graduate Committee

13/06/2011



Dr. Mohamed Ibn Kahla  
Visiting Associate Professor  
Department of Electrical Engineering  
Queen's University, Kingston, Canada  
Graduate Committee

13/06/2011



Dr. Mohamed El-Tarhuni  
Department Head  
Department of Electrical Engineering

13/06/2011



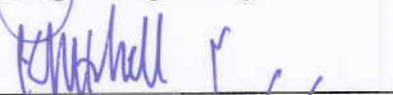
Dr. Hany El Kadi  
Associate Dean  
College of Engineering

20/6/11



Dr. Yousef Al-Assaf  
Dean  
College of Engineering

21/6/11



Dr. Gautam Sen  
Vice Provost, Research and Graduate Studies

12/7/2011