**ROBOTIC ADAPTIVE LEARNING TO IMITATE HUMAN ACTION THROUGH EIGENPOSES MODEL**

***BY***

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**CERTIFICATION**

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**H.O.D DATE**

**DR. RUFAI K.I**

**DEDICATION**

This research project is dedicated to God Almighty, the guardian, protector and keeper of our life. We also dedicate it to our lovely and wonderful parents for their care and support for our life.

**ACKNOWLEDGMENT**

Our foremost acknowledgement goes to God almighty; the author and the finisher of our faith for the enablement given to me embark on this journey. All glory to His hallowed name.

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**Abstract**

*Learning robots that can acquire new motor skills and reﬁne existing one has been a long standing vision of robotics, artiﬁcial intelligence, and the cognitive sciences. Early steps towards this goal in the 1980s made clear that reasoning and human insights will not sufﬁce. Instead, new hope has been offered by the rise of modern machine learning approaches. However, to date, it becomes increasingly clear that off-the-shelf machine learning approaches will not sufﬁce for motor skill learning as these methods often do not scale into the high-dimensional domains of manipulator and humanoid robotics nor do they fulﬁll the real-time requirement of our domain. As an alternative, we propose to break the generic skill learning problem into parts that we can understand well from a robotics point of view. After designing appropriate learning approaches for these basic components, these will serve as the ingredients of a general approach to motor skill learning. In this research, we discuss our recent and current progress in this direction. For doing so, we present our work on learning to control, on learning elementary movements as well as our steps towards learning of complex tasks. We show several evaluations both using real robots as well as physically realistic simulations.*

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