



Chinwe EKENNA

Home Country
Nigeria

Degree
PhD in Computer Science

Expertise
Computer Science

Research Focus
Robotics and
Computational Biology

Host University
Texas A&M University,
United States

Fellowship Awarded
2012

Chinwe Ekenna attended Covenant University, located in Ota, Ogun State, Nigeria, where she gained a BSc and MSc, both in Computer Science. Her Master's thesis was entitled "Computational Evaluation and Characterization of some Malaria Drug Targets". She spent some time as a Graduate Assistant at Covenant University, helping to teach and grade courses in the Department of Computer and Information Science.

Chinwe's PhD research is geared towards using motion planning algorithms for highly articulated linkages. Motion planning involves the use of algorithms and methods in planning motions for objects. These algorithms help to identify a valid path for an object so it can move from a start point to its destination without hitting obstacles or colliding with the walls of its set environment. Example applications include automobiles, assembly machines, and search and rescue robots.

The techniques Chinwe will be employing in her research are sampling-based motion planning. This samples valid configurations of movable objects and connects them with simple local planning methods from which trajectories can be generated. She will be working on developing better methods to characterize and analyze these configurations. The research has applicability for ongoing research in molecular motions in a bid to understand the cause of conditions such as Alzheimer's disease and Cystic Fibrosis. It also has applications in the research for ways to reduce the incidence and impact of malaria, which is major cause of infant death in Africa.

After her PhD studies, Chinwe plans to return to Covenant University to develop a research team working in the field of molecular motions and robotics using motion planning, and apply them to challenges in Nigeria such as oil spills and malaria.