Godfred Inkoom

Contact Information
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DEGREES

Ph. D Physics (Mathematics Minor), Mississippi State University, USA, Dec 2017
Advisor: Dr. M.A. Novotny
Thesis Title: "Quantum Dragon Solutions for Electron Transport through Single-Layer Planar Rectangular Crystals"

MS, Physics (Non-Thesis), Mississippi State University, Dec 2016

MSc. Solid State Physics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, 2013

MSc, Condensed Matter Physics, Norwegian University of Science and Technology, Trondheim, Norway, 2011

BSc. Physics, University of Cape Coast, Ghana, 2006

LIST OF PUBLICATIONS

D. Ompong**, G.Inkoom** and J. Singh**, "**Effective mass of heavy, light, and spin split-off band electron and hole g-factor in cubic perovskite materials". J. Appl. Phys. 128, 235109, 2020, (6 pages)

G. Inkoom and M.A. Novotny. "Quantum Dragon Solutions for Electron Transport through Nanostructures based on Rectangular graphs". Journal of Physics Communication, **2**, 115019, 2018 (22 pages)

M.A. Novotny, L. Solomon and **G. Inkoom.** "Quantum Transport through a Fully Connected Network with Disorder''. Physics Procedia, **53**, 71-74 (2014)

G. Inkoom, F. Boakye and J. Archer. "Temperature and Angular Dependence of Ferromagnetic Resonance (FMR) signal of $La_{0.7}Sr_{0.3}MnO_3$ (LSMO) Thin Film using FMR Technique". Research Journal of Applied Sciences, Engineering and Technology **7** (15) 3064-3068: 2014

REFEREE ACTIVITY
Reviewer of the following journal:
Journal of Physics: Condensed Matter

TEACHING

Visiting Assistant Professor, Fall 2018-Summer, 2020
Department of Physics and Astronomy, Mississippi State University, Starkville, MS, USA.
Courses taught include;
Gen. Physics I, PH 1113 (Trigonometry based),
Gen. Physics III, PH 1133 (Non-calculus-based study of electricity and magnetism and selected topics in modern physics)
Physics I, 2213 (Calculus-based)
Gen. Physics II, PH 1123
Some responsibilities include

- ✓ Instructor of Records
- ✓ Writing syllabus, using Mastering Physics, constructed midsemester exam
- ✓ Marking, tracking and analyzing student grades and progress

Physics Lecturer
Department of Physics and Astronomy, Mississippi State University, Starkville, MS, USA,
Summer I 2018, Summer II 2018: PH 1113 (Trigonometry Based)
Some responsibilities include;

- ✓ Instructor of Record
- ✓ Writing syllabus, using Mastering Physics, constructed midsemester exam
- ✓ Marking, tracking and analyzing student grades and progress

Guest Lecturer for Applications of Quantum Mechanics I PH 4723/6723
Department of Physics and Astronomy, Mississippi State University, Starkville, MS, USA,
Spring 2018

- ✓ Preparing solutions and grading homework problems [10 graduate students and 3 undergraduate students]
- ✓ present occasional lectures when main Professor is out of town

Teaching Assistant for PH 1133
Department of Physics and Astronomy, Mississippi State University, Starkville, MS, USA, Fall 2015

- ✓ Preparing solutions and grading homework problems for over 50 undergraduate students
- ✓ Grading final exam

Teaching Assistant

Department of Physics, Kwame Nkrumah University of Science and Technology, Kumasi, 2008-2009

- ✓ Demonstrating experiments to undergraduate students
- ✓ Grading of lab reports

Teaching Assistant
Department of Physics, University of Cape Coast, 2006-2007

- ✓ Organizing tutorial for undergraduate students
- ✓ Grading of midterm and final exams

Laboratories taught at the undergraduate level as a graduate teaching assistant at Mississippi State University, Fall 2011-Fall 2015
PH 1113 – General Physics I
PH 1123 -General Physics II
PH 2223-Physics II

Supervisory Role
Lab Manager/ Coordinator of undergraduate Lab [Fall 2018-Spring 2019]

- ✓ Lab coordinator in Fall 2018 and Spring 2019
- ✓ Supervise the graduate teaching assistants teaching labs in both semester
- ✓ Assign teaching duties to graduate students

Research Assistant
Department of Physics and Astronomy, Mississippi State University, Starkville, MS, USA, Spring 2016

- ✓ Performed research on quantum electron transport through nanostructures

FUNDED PROJECT
"Quantum Dragon Explorers", NSF I-Corps, Co-PI, $ 3000 from Mississippi State University

CONFERENCES
Oral Presentations

American Physical Society (APS), March 4-8, 2019 [Boston, Ma]
Quantum Dragon Solutions for the Tight Binding Model for 2D Ribbon Nanodevice

American Physical Society (APS), March 14-18, 2016 [Baltimore, Maryland]
Multi-Channel Quantum Dragons from Rectangular Nanotubes with Even-Odd Structure

American Physical Society (APS), March 02-06, 2015 [San Antonio, Texas]
Single and Multi-Channel Carbon based Quantum Dragons

OTHER PRESENTATIONS

Multi-channel quantum dragons from rectangular nanotubes with even-odd structure: Second Annual University of Mississippi (UM) and MSU Physics Research Symposium. March 4, 2017 [Starkville, Mississippi]

WORKSHOP AND EVENTS ATTENDED

Modeling Instruction Workshop, March 3, 2019 [Starkville, MS]
Presentation Development & Delivery, June 22, 2017 [Starkville, MS]
Conference Poster Design: Using Microsoft Publisher, June 1, 2017 [Starkville, MS]
Demystifying the Dissertation Process, Feb 8, 2017 [Starkville, MS]

MEMBERSHIP

American Physical Society (APS), 2011 – present

COMPUTER SKILLS

Mathematica

REFEREES

1. Dr. Mark A. Novotny
   Head, Department of Physics and Astronomy
   Mississippi State University
   Email: man40@msstate.edu
   Phone: 662-325-2688

2. Dr. Henk Arnoldus
   Graduate Coordinator, Department of Physics and Astronomy
   Mississippi State University
   Email: hfa1@msstate.edu
   Phone: 662-325-2919

3. Dr. Seong-Gon Kim
   Department of Physics and Astronomy
   Mississippi State University
   Email: kimsg@hpc.msstate.edu
   Phone: 662-325-8031