

AKOLE KAFUI MENSAH, B.S.

Wright State University

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344 Neuroscience Engineering Collaboration

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URL: <https://engineering-computer-science.wright.edu/biomedical-industrial-and-human-factors-engineering/research/profile/akole-mensah>

ACADEMIC TRAINING

MS	Industrial & Human Factors Engineering	Wright State University	Ongoing (2016)
BS	Biomedical Engineering	Wright State University	2015

CERTIFICATES

- Wright State University- Lab safety training, Department of environmental Health and Safety (2015)
- Non-clinical X-ray tube operation certification via Wright State University BME 4701 (2014)
- Biomedical Research Investigators – Stage 1. Collaborative Institutional Training Initiative. Wright State University (2014)

WORK AND RESEARCH EXPERIENCE

Wright State University

2015 - Present

Graduate Research Assistant

- Conducted literature review on trust in automation, trust in human-robot interaction (HRI), and trust in human- computer interaction (HCI), haptics affective, and robotic surgery.
- Developed research questions on trust in robotic surgery and its relation to trust in (HRI), and trust in (HCI).
- Designed surveys and questionnaires, on trust in robotic surgery from both surgeons, primary care physicians, patients and general public's perspectives, using Qualtrics.
- Presented abstract on thesis topic at the Wright State University Celebration of Research, Scholarship and Creative Activities.
- Developed an IRB renewal for Laparoscopic Surgery Training Systems (LASTS) project.
- Worked on the effects of stochastic resonance (SR) on performance during robotic surgical training.
- Designed IRB for SR in robotic surgery.
- Worked on experimental design for stochastic resonance in robotic surgery with SR devices and the da Vinci skills simulator at Miami Valley hospital, Dayton, OH.
- Worked with class 3b Laser, Quantum Dots (CdTe & CdSe), and CCD Spectrometer.

- Conducted literature review on Quantum dots (QDs) and their potential applications in biological sensing and electronics.
- Designed experiments and collected data on the mixture of two QDs, and mixtures of three QDs.
- Analyzed the spectra signals of these mixtures of QDs, interpreted and presented the results.

Wright State University

2014 – 2015

Undergraduate Research Assistant

- Conducted research on Laparoscopic Surgery Training Systems LASTS-EXP- 3, a study of decision making during laparoscopic surgery using an eye tracker device to design a surgical trainer to better train and assess surgical skills.

Designed the experiment, collected data, analyzed & interpreted the results.

- Assisted in research on Natural Orifice Transluminal Endoscopic Surgery-NOTES, a study of force application for a better control of scope manipulation during colonoscopy procedure.
- Assisted with data collection and data analysis.

Wright State University

2012 –2014

Computing and Telecommunications Services-CaTS - CTS Student Assistant

- Installed classroom equipment including computer, projector and monitors for use
- Responded to technical classroom problems and assisted professors when needed
- Provided clerical assistance for faculty and staff for educational services

GRADUATE COURSE PROJECTS

Fundamentals of Human Factors Engineering

- Multiple projects involved
 - Created user profile , generated task analysis & task decomposition
 - Designed and conducted experiment to test hypothesis
 - Apply human factors principles to provide solutions & recommendations

Design and Analysis of Engineering Experiments

- Designed and conducted experiments to test hypotheses on several projects including health and human performance
- Analyzed, interpreted, and presented statistical results

Human-System Interaction and Usability Engineering

- Worked on project involving the improvement of Wright State Library mobile design

- Performed Usability testing
- Created user profile, tasks analysis
- Use Axure to improve the mobile design
- Provide recommendations for refining user experience

Research Methods in Human Factors Engineering

- Conducted literature review on classroom chair design and its influence on student learning and retention.
- Developed hypothesis, worked on experimental design
- Collected and analyzed the data
- Interpreted & presented results

SENIOR DESIGN PROJECT

- Gossard, M., Mensah, A., Millar, E., Wunderlich, L. (2015). Indocyanine Green (ICG) Imaging for Target Detection in Minimally Invasive Surgery. Wright State University.
- Designed and developed a prototype system that uses Indocyanine Green (ICG) imaging to identify anatomical structures in laparoscopic cholecystectomy surgery.
- Captured excited ICG image with our design system and validated the system.

AWARDS & HONORS

- Outstanding Senior Design Award 2015
- International Friendship Affair IFA Award 2012
- University College Award 2011
- Wright State University BIE Department Scholarship 2015

ACADEMIC & PROFESSIONAL SOCIETY SERVICE & ACTIVITIES

- Wright State University Engineers Without Borders, EWB 2014-Present.
- Peer Mentor at WSU - College of Engineering and Computer Science 2012 – 2013
- National Society for Black Engineers - Academic Excellence Chair 2013 –2014
- Wright State University Biomedical Engineering Society – Member 2012- 2014
- Wright State University International Cultural Exchange 2011- 2014

Wright State University 2011

- Trebuchet competition (voluntary)

Thurgood Marshall High School 2013 –2014

- Tutored 15 students in math and science in preparation for SAT/ACT
- Graded and developed teaching curriculum to increase students skills