

Charles Anthony Collins

Professional Address

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Education

- Master of Engineering Program, North Carolina State University, Concentration Computer Science. Currently enrolled.
- Bachelor of Science, North Carolina Central University, Mathematics, 1983.

Professional Experience

- Academic Laboratories Manager, Department of Biological and Agricultural Engineering, North Carolina State University, Raleigh, North Carolina, August 1995 – Present.
- Engineering Research Technician II, Department of Biological and Agricultural Engineering, North Carolina State University, Raleigh, North Carolina, August 1989 – Present.
- Faculty, Mathematics Department, Ligon Gifted and Talented Magnet Middle School, Raleigh, North Carolina, February 1986 – June 1989.
- Research Associate, Department of Mechanical and Aerospace Engineering, North Carolina State University, Raleigh, North Carolina, August 1983 - December 1985.

Professional Certifications

NCSU Technologies Institute Certification.
NCSU HR Supervisory Certification.
NCSU EH&S Laboratory Safety Certification.

Professional Activities at North Carolina State University

Distribution of Appointment: 50% Academic and 50% Research

Academic Programs

- Courses for Demonstrations and Lab Instruction for the last several years
 - BAE 023 - Light Equipment Technology, Spring semesters.
 - BAE 033 - Agricultural Tractors and Machinery, Fall semesters.
 - BAE 201 - Shop Management and Practices, Fall and Spring semesters.
 - BAE 202 - Intro to BAE Methods, Spring semesters.
 - BAE 311 - Agricultural Machinery and Power Units, Spring semesters.
 - BAE 344- Circuits and Controls, Fall semesters.
 - BAE 462- Machinery Design Concepts, Fall semesters.
- Computer Resources Activities for the last several years
 - Operation and support of classroom local area networks for PC, UNIX and WiFi laptop platforms.
 - Programming assembly languages, object-oriented languages, HTML and internet protocols; assemble and write new online materials.

Research

Computer-aided-engineering, engineering economics, engine cycles, power transmission, hydraulics, traction, combined stresses, and finite element analysis for machinery systems. Research activities center in the areas of machinery engineering and development of automated sensing and control systems for effective use of energy and labor in agricultural production.

Publication

Bowers, C.G., C.A. Collins and E.P. Harris. 2004. Low moisture planting of cotton for optimum emergence. BAE 2005-02, Jour. of Bio. And Agr. Eng'r, N.C. State University, Raleigh, NC. Reviewed and approved for submission to ASAE for publication in ASAE "Applied Engineering in Agriculture Journal."