

# Roy Segars, Jr.

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## EDUCATION:

- Ph.D. 2000, Clemson University, Clemson, SC, (Management Science)
- M.S. 1997, University of Delaware, Newark, DE, (Operations Research)
- M.S. 1972, Georgia Institute of Technology, Atlanta, GA, (Chemical Engineering)
- B. ChE. 1970, Georgia Institute of Technology, Atlanta, GA, (Chemical Engineering)

## PROFESSIONAL EXPERIENCE:

### **University of Georgia, Athens, GA, 2000-Present**

Instructor, Department of Mathematics

### **Clemson University, Clemson, SC, 1997-2000**

Ph.D. Candidate & Teaching Assistant, Mathematics Department and Business School

### **E.I. DuPont de Nemours & Co., Inc. Wilmington, DE, 1974-1996**

Senior Consultant (Operations Research), 1995-1996

Research Manager (Teflon Coatings), 1994-1995

President (DuPont Separation Systems, Inc.), 1991-1994

Technology Manager (Membranes), 1988-1991

Development Manager (Polymers for Electronics), 1986-1988

Product Manager (Packaging Resins), 1984-1986

Senior Development Sales Representative (Packaging), 1982-1984

Senior Research Supervisor (Packaging), 1980-1982

Research Supervisor (Polymers), 1977-1980

Research Engineer (Polymers), 1974-1977

### **U.S. Environmental Protection Agency, Atlanta, GA**

Technical Advisor, 1972-1974

## **SELECTED ACCOMPLISHMENTS:**

Proved that non-convex planar location problems with barriers and rectilinear distances, a mathematical problem thought to be NP, was actually Polynomial of degree 4.

Within six months brought a business that had historically lost \$3-4 million/year to positive cash flow and break-even profitability. Restored employee morale by setting challenging but realistic goals and objectives.

Managed a \$100 million worldwide business during a critical time when patents expired and major competitive thrusts were emerging in the U.S., Europe, and Japan. Developed and implemented a worldwide business plan that effectively held off competition and yielded record sales and earnings for each of the next five years.

Reenergized a research group that was viewed by management as unproductive resulting in the commercialization of a new product line, annual cost savings exceeding \$500M/year, and capital cost savings of more than \$3MM.

Initiated a new area of research focus for DuPont by developing and implementing a Technology Plan marrying DuPont's polymer strengths with key market needs for new polymers.

Co-invented and developed patented technology for hydrolysis of methyl acetate, resulting in increased capacity and improved operating efficiency.

## **PUBLICATIONS:**

Planar Location Problems with Block Distance and Barriers, *Annals of Operations Research*, 136, 117-143, 2005.

Solving Rectilinear Planar Location Problems with Barriers by a Polynomial Partitioning, *Annals of Operations Research* 111, 111-133, 2002.

An Equivalence Result for Single Facility Planar Location Problems with Rectilinear Distance and Barriers, *Annals of Operations Research*, 111, 89-110, 2002

Location Problems with Barriers using Rectilinear Distance, Dissertation, Clemson University, December 2000.

Pressure Penetration of a Non-Wetting Liquid into Cylindrical Pores, Masters Thesis, Georgia Institute of Technology, 1972

**PATENTS:**

A Process for Hydrolysis of Methyl Acetate, U.S. 4,352,940

A Method for Improving Filtration Efficiency, U.S. 5,308,494

**TEACHING HONORS:**

2009 ARCH Award, Presented by the UGA Student Government Association for dedication to students, excellence in the classroom, and distinction within the University

2006 Selected by the University of Georgia Freshman Class to deliver the "Last Lecture".

**TEACHING EXPERIENCE:**

University of Georgia 2000-Present

Math 2700, Differential Equations

Math 2200, Differential Calculus

Math 2260, Integral Calculus

Math 2110, Calculus for Economics

Math 1060, Mathematics of Decision Making

Math 1101, Introductory Math Modeling

Clemson University 1997-2000

MthSc 102 & 207, Business Calculus

MthSc 210, Applied Matrix Algebra

MASC 312, Decision Models for Management

MGT 301, Principles of Management

Georgia Institute of Technology 1970

Math 107 & 108, Engineering Calculus

**ACADEMIC HONORS:**

International Exchange Program - Loughborough University, 1970-71

Outstanding Chemical Engineering Senior, 1970

Tau Beta Pi (President, Georgia Alpha Chapter)

Phi Kappa Phi

Phi Eta Sigma

Chi Epsilon Sigma (Chemical Engineering Honorary)

Sigma Xi

## **COMMUNITY ACTIVITIES AND PUBLIC SERVICE:**

Participant, Dancing with the Athens Stars 2016, a local charity event supporting Project Safe

Leader, Disciple II Class, First United Methodist Church, Hartwell GA, 2010

UGA Argentine Tango Club – Performance Group, 2009-Present

Volunteer mathematics tutor, Hart County High School, 2008-2009

Volunteer pianist at church and at local assisted living facility 2000  
Present

Treasurer, Sharon Presbyterian Church, Hartwell, GA 2005-2006

Trustee, Hanover Presbyterian Church, Wilmington, DE, 1987-1990

Elder, United Presbyterian Church