

***AN EXAMINATION OF FACTORS
INFLUENCING THE SALARIES OF THE
COLLEGE OF BUSINESS FACULTY***

SUBMITTED BY: KEVIN CLARK

FOR: SENIOR WHITTLE THESIS PROJECT

DATE: 5/11/95

INTRODUCTION

This paper is the summation of my senior thesis project for the University of Tennessee's Whittle Scholarship. All Whittle Scholars are required to submit a senior thesis project that has been approved by a faculty mentor. This project is designed to expose the Whittle Scholar students to research methods and paper development. It is hoped that this initial exposure will facilitate later such efforts in postgraduate education or in the students' respective careers.

The purpose of my particular project is to examine any potential relationships or correlations between the salaries of University of Tennessee, Knoxville's College of Business faculty and a set of developed faculty data variables. This purpose was arrived at through collaborative efforts between my faculty mentor Dr. Bruce Fisher, Accounting and Business Law professor at the University of Tennessee, and myself. Additional information concerning the identified faculty data variables and how the project idea was developed will be contained in the following section of this paper.

The paper will be organized into thematic headings in order to facilitate ease of reading. These headings will be discussed chronologically to mirror the actual progression of the project. The used headings are as follows: 1) Project Idea Development 2) Research Methodology 3) Results 4) Conclusions 5) Suggested Improvements and Recommendations for Further Study. Following the body of the paper will be included tables and graphs cited throughout the text. The reader is encouraged to reference these citations whenever they occur in the text.

PROJECT IDEA DEVELOPMENT

As mentioned earlier, the current project does not constitute the original research ideas developed by Dr. Fisher and myself. In fact, the current scope of this project was pared down due to manageability concerns, ability to obtain information and time constraints.

Originally, Dr. Fisher had suggested that I develop a comprehensive database for law school professors in the United States. The database was to include such information

about the law faculty as place of terminal degree, gender, ethnicity, number of degrees obtained, academic discipline, and years teaching. One of Dr. Fisher's aims in developing this database was to establish a source of information for his upcoming revisions of the latest edition of his Introduction to Business Law 301 undergraduate course.

Furthermore, the project was thematically appropriate due to my interest in pursuing a legal education. Dr. Fisher felt that such a project would give me a better understanding of the nature of a legal education prior to my enrollment this fall into Vanderbilt Law School. Also, the project was selected because of the relatively easy access to the initial data needed to begin the project, namely a listing of all law school faculty, their degrees, and the institutions granting those degrees.

The first step undertaken in pursuing this project idea was to identify all potentially relevant faculty data to be included in the database. The following data was considered relevant to our purpose: 1) faculty salaries 2) current law school teaching at 3) academic subdiscipline and concentration 4) institution granting the Juris Doctorate, J.D., and/or L.L.M, a master's degree in teaching law 5) gender 6) ethnicity 7) number of years of teaching 8) employment experience in academic discipline or subdiscipline and 9) publication record.

Additionally, Dr. Fisher suggested that we also obtain information concerning the type of automobile, if any, driven by the law school professors. This suggestion was driven by his previous publication of an article in the 1994 Seton Hall Law Review concerning positive law arbitrage: the ethical consumer. In this article, Dr. Fisher reviewed the ethical implications of consumers' economic purchases of international products. Dr. Fisher posited that a consumer should only purchase products from a country with legal standards concerning civil rights, labor laws and environmental regulation that are similar and equal to those held in the consumer's country of residence. Otherwise, the consumer would essentially economically veto those standards enjoyed by him/herself in the consumer's country of residence by supporting products manufactured in countries with

less stringent standards than the consumer's country. For example, it would be unethical for an American working woman to purchase an automobile from a country that actively discriminates against women in the workplace. This purchase would be unethical because the woman would essentially be supporting the country's lack of anti-discrimination laws, which may allow it to manufacture goods cheaply. These very same laws have granted this particular woman the opportunity to work with a salary equitable to her male counterparts.

Dr. Fisher wished to investigate how ethical law professors were in their purchase decisions. We focused on automobiles because such a purchase is sufficiently large to constitute a valid ethical decision. The purchase of cheap foreign consumer goods is not large enough to warrant an investigation into ethical consumerism because the individual purchase amount is not large enough to substantially affect trade deficits and imbalances between countries.

To capture this information, I was to develop a survey explaining the general purpose of my research and requesting information concerning number of automobiles owned and their respective manufacturer. The surveys were to be distributed through the mail to the law school professors. Rather than send surveys to professors of all legal concentrations, Dr. Fisher and I decided to choose one concentration and send the survey to all law professors within that particular concentration.

Although I developed the survey necessary to gather the needed information, this portion of the project was discarded after re-evaluation because of the short time frame available to complete the project. We realized the time involved in sending the survey via the mail, the difficulty in eliciting cooperation from the professors to reveal the necessary data, and the time needed for these professors to return the survey would prohibit me from compiling the data and submitting a written assessment of my analysis.

In lieu of this recognition, Dr. Fisher and I decided to pare the project's scope down from a national level to a local one. We decided to investigate correlations, similar to

those stated in the original project, among a group of faculty whose relevant data would be more easily accessible. Thus, we decided to investigate the faculty at the University of Tennessee. However, this project would differ from the original project idea in that it would be conducted from the perspective of determining what faculty behaviors and/or characteristics were rewarded by financial compensation. The assumption underlying this new perspective was that UTK's administration would most reward those things that it most valued.

To facilitate ease of manageability, I suggested we focus on a specific college. We determined that my experience within the College of Business would provide an excellent reference point to be used within the study. Thus, the project was determined to examine correlations between the salaries of UTK's College of Business faculty and the relevant data variables.

RESEARCH METHODOLOGY

The first stage in my research methodology was to find data concerning names and salaries of the CBA faculty. The salary information was the most significant information required for this project in that it was the key variable to which all other variables would be compared. A concern of mine was how to obtain salary data, what I considered to be highly confidential information. However, my inquiries to UTK administration revealed that the salary information for all teachers at UTK is public information because the institution is supported partially by tax-payer money. The information is kept in an annual document of several volumes that is entitled the Faculty State Budget for UTK. This budget indicates the names of all employed faculty, how much each faculty member earns in annual salary and any additional funding received through research grants and federal subsidies.

The UTK budget was located in the Reference Room of John Hodges Library. The only prerequisite for scanning this information was that I leave some form of identification with the library attendant. I then proceeded to make copies of all salary information for

the CBA. This information was compiled according to the five departments comprising the CBA, accounting, economics, management, marketing & transportation and logistics, and statistics. The total number of CBA faculty listed was 115.

After obtaining the salary information, I selected a spreadsheet program, QuattroPro, to serve as the data storage device for this project. The spreadsheet listed faculty members vertically and data variables horizontally. The horizontal headings were as follows: 1) faculty name 2) department 3) title 4) gender 5) terminal degree 6) institution where terminal degree received 7) number of classes taught 8) years of previous employment experience 9) salary and 10) years of service to UTK.

Next, I needed to obtain the data variables for each individual faculty member. I discussed the scope of my project with individuals in UTK's Office of Research and Records and was referred to the Faculty Data File, available through the world wide web address for UTK. Upon accessing this data file, I realized the information contained therein was irrelevant to my project in that it only provided aggregate faculty information per college. After further discussions with the Office of Research and Records, it was determined that the additional database files existed at UTK's worldwide web address that would provide me with information for individual faculty members. I accessed this address through the Netscape Application program at the microcomputer lab of John O. Hodges library.

Having accessed the faculty information for CBA, I printed the first two sheets of the data files. The files themselves varied in length from one to four pages. For manageability purposes, I only chose to print the first two pages. These pages contained the information I was most interested in obtained for my comparative analysis. I then proceeded to input the printed data into the QuattroPro spreadsheet for my project. For the purposes of this project, I did not feel it was necessary to input this data for each of the 115 faculty members. Accordingly, I chose to only examine the data for a representative sample of nine faculty members per department. These nine members were randomly chosen based

on first nine names appearing as I scanned through the printed data sheets (Please note that the data sheets were not completely arranged in any particular number, therefore insuring the selection was random and not systematic).

RESULTS

In conducting analysis of the available data, I decided to focus my attention against the relationship between gender and title, between title and salary and between years of service and salary. Also, a relationship between gender and salary can be inferred from combining the effects of gender, title and salary.

We begin with investigating the nature of the relationship between the gender of a faculty member and that member's academic rank. The titles indicated by the budget data indicate there are five levels of academic rank among faculty. They are professor, assistant professor, associate professor, instructor and lecturer. Of the 45 CBA faculty, ten were identified as professors, all of which were male. Seven of the ten assistant professors were male. Of the 21 associate professors, seventeen were male. The four instructors were divided evenly between two males and two females. There was only one lecturer, who was male.

The conspicuous absence of females in the ranks of faculty suggests the need for further investigation to ascertain the source of this absence. The fact that all professors, the highest academic rank among faculty, were male is extremely disturbing. However, this researcher must concede that the small sample may account for some of that fact. Although females were better represented in the assistant professor and associate professor ranks, they were disproportionately outnumbered by males. The only gender equity in the faculty positions was found among instructors, which were divided evenly between males and females.

I also found that there was a strong correlation between academic rank and the accompanying salary. The results were as follows (SEE THE NEXT PAGE):

<u>ACADEMIC RANK</u>	<u>AVERAGE SALARY</u>
1. PROFESSOR	\$69,487
2. ASSOC. PROFESSOR	\$56,558
3. ASST. PROFESSOR	\$63,340
4. INSTRUCTOR	\$27,621
5. LECTURER	\$30,682

As the table indicates, there was clear delineation in pay according to academic rank. As would be expected, the professors' average salaries were substantially higher than the next highest rank of assistant professor, in fact \$6,147 higher. There was a similar gap of \$6,762 between the average salaries of assistant professors and associate professors. The largest disparity in pay rates was recorded between associate professors and lecturers. On average, associate professors were paid nearly \$30,000 more, or twice as much as lecturers. The smallest gap was between lecturers and instructors, with lecturers making only \$3,016 more than instructors.

The last analysis conducted centered around the relationship between years of service and salary. Based on the distribution of years of service, I divided service into three classifications: 1) 0-9 years 2) 10-19 years and 3) 20+ years. I then proceeded to calculate the average salary level among each of these years of service classifications.

	<u>0-9YEARS</u>	<u>10-19YEARS</u>	<u>20+YEARS</u>
Avg. Salary	\$62,732	\$57,469	\$57,302

The results of this analysis were startling in that they were counter-intuitive. One would assume that the higher salaries would be paid to those with the most years of service. I had assumed that greater tenure, or length of stay, at UTK would translate into higher

positions and higher pay. Obviously, this assumption was not the case. Rather, it seems that those faculty in the earlier stages of their service to UTK were paid significantly higher salaries.

The highest paid bracket was the one for 0-9 years of service with \$62,732 with the 10-20 and 20+ following a distant second and third, respectively. The disparity between those faculty with the longest level of service and the rest would have been even larger had it not been for three outliers in the 10-20 service bracket. These outliers were two instructors and a lecturer, the lowest paid academic ranks on the faculty totem pole. Without these three data points, the 10-20 bracket would have earned an average salary of \$64,726, placing it as the most lucrative service level.

The only explanation I can posit to explain what may at first seem counter-intuitive would deal with the respective starting salaries of those faculty with long service levels and those just recently joining UTK. It is true that many years of service are usually accompanied by consistent pay raises and promotions. However, inflation has caused starting salaries to increase over the years. Therefore, a relatively recent addition to the faculty would start with substantially more real sum money than their counterparts did when they joined UTK 20 years ago. Additionally, we cannot assume that those with shorter service levels are necessarily younger than those with longer service levels. Many of UTK's faculty served as teachers at other universities for several years prior to arriving at UTK.

CONCLUSIONS

1. Females are under-represented among the College of Business faculty.
2. Because of their under-representation in the highest echelon of the CBA's faculty, professors, female faculty earn salaries that are lower than their male counterparts.
3. Those faculty with the most years of service do not earn the highest salaries.
4. In the academic hierarchy, those faculty ranked higher in title earn substantially more than do their lower ranked colleagues.

5. Within the academic hierarchy, there are two general income classifications based on title, the middle-to-high income faculty consisting of professor, associate professor and assistant professor.

SUGGESTED IMPROVEMENTS AND RECOMMENDATIONS

1) Broaden The Scope of Faculty Examined The number of faculty that were actually utilized in this study was too limited to make broad generalizations about the University of Tennessee or about higher education in general. My initial database only consisted of faculty within the College of Business, numbering 115. The only safe conclusions we can draw from such a study are limited to the parameters of the business school. We do not know if these conclusions would also hold true for the College of Liberal Arts and Sciences, the College of Engineering or the College of Education. It may be that my findings reflect the unique nature and idiosyncrasies of a business education. To offer more comprehensive conclusion, applicable to UTK as a whole, the researcher would need to conduct this research within each of the colleges present at UTK. To preclude such a project from becoming unduly burdensome, the researcher could statistically determine what would be an appropriate representative sample within each college. Then analyses of the data could be conducted both for the specific colleges and for UTK as an aggregate. Expanding the scope in such a manner would augment the accuracy of the findings and offer university wide application.

Furthermore, I did not use all 115 CBA faculty members in my analysis. I took a representative sample of nine members from each of the five departments, totalling 45 faculty members. Although some findings can be gleaned from the analysis of this data, the conclusion may not adequately reflect the totality of the College of Business. In statistical analysis, the greater the number of the sample, the greater the resulting accuracy of the findings. Thus, it would be recommended that an analysis of the CBA include all 115 faculty members for greater accuracy. Had this researcher had more time, such a task would have been manageable and undertaken.

However, there were also other limits to the amount of information available to be evaluated. The Netscape Faculty Information System has not been thoroughly completed yet. I discovered several instances where the State Budget listed faculty members that the FIS system failed to mention altogether. With the current system, it would be impossible to evaluate all the individual faculty members of a college. It should be noted, though, that the Office of Research and Records is currently in the process of updating all files. Such an update would allow a comprehensive assessment of each college and UTK holistically, if so desired.

2) Develop Uniformity of Faculty Data Files One of the problems I encountered during my research process was the lack of uniformity among faculty data files in the information offered about themselves. One faculty member may indicate all the books they had coauthored and written, while another member may fail to report that data at all. One teacher may indicate how many seminars and talks he/she had given while another would not. Such discrepancies made it more difficult to compare the faculty members. Fortunately, there were certain basic characteristics that all faculty members provided information for, such as educational level and number of courses taught. However, even the courses taught data could be confusing since some faculty reported this data within the last five years while others did so for their entire academic career. The discrepancies between the faculty were best exemplified by the varying lengths of their data files. As mentioned earlier some faculty's files were only a page long, while others numbered four pages in length. Although some of this discrepancy can be explained by the varying lengths of tenure and experiences, some disparity is attributable to lack of uniformity in reporting of data.

3) Utilize More Effective Analytical Techniques Although I did use averages and means within title, gender and years of service classifications, my analysis would have been more complete had I included linear regression to establish quantifiable correlations between the number-driven variables, such as years of service and number of classes taught, and salary.

4) Include Additional Data Variables Although the data variables included were important and very informative, there were a few data points that were excluded that may have provided more insight into what the University of Tennessee values and rewards with respect to its faculty. One of the most intriguing of these additional data variables would have been each faculty's publishing record. There has long been a debate, both within and without academia, as to whether a teacher's primary focus should be on research or teaching. Some critics have accused the University of TN, as well as other institutions, of encouraging research at the expense of good teaching by only promoting and granting raises to those with the most extensive publishing records. Attempting to establish a correlation between publishing record and salary could determine if there is any validity to these accusations.

Consistent with the theme of determining if research or teaching is most valued by UTK, would be an effort to determine if any correlation exists between the number and prestige of teaching awards or honors received and financial compensation. If teaching is highly valued, one would assume that those consistently receiving the best and greatest number of awards would be compensated more lucratively. However, if there is no correlation between the receipt of teaching awards and salaries, then we must attribute variability in salaries to other factors, such as a greater emphasis on research.

Number of students taught also is indicative of the value placed on teaching. If an university's primary goal is to provide a good education for the greatest number of people, then one might expect to find that the teachers having the greatest number of students in classes might be more highly compensated in salary.

Another relevant data variable would be sources, if any, of external funding. Some professors and instructors at UTK receive funding from the private sector or the federal government to conduct research. It would be interesting to determine if a faculty member's state salary is adjusted down to reflect this external funding. On the other

hand, it may be that those professors receiving external grants are your best faculty members and are therefore rewarded with higher salaries.

APPENDICES:
INCLUDING SAMPLE
OF FACULTY DATA SHEETS
AND
DATA SPREADSHEET

Charles E. Noon

UTK Department(s)

Department Name » Percentage of Effort

Management Department » 100%

Campus Address and Phone

Room Number » Building » Phone » Fax

613 » Stokely Management Center » 974-1683 » 974-3163

E-mail Address

noon@telstar.bus.utk.edu

Start date at UTK

August 1987

Academic rank and professional title

Rank » Title

Associate Professor » Doctor

Previous Employment (other institutions)

Title » Institution » Department » Years

Assistant Professor » University of Tennessee » Management » 6

Teaching Assistant, Lab Instructor, and Research Assistant » University of Michigan » Industrial and Operations Engineering » 4

Educational History

Degree » Institution » Year Awarded » Thesis Title

Ph.D. » University of Michigan » 1993 » The Generalized Traveling Salesman Problem

MEng » University of Louisville » 1982 » Inventory Control System Simulation

BS. » University of Louisville » 1981 »

International Collaborations

I've made collaborative visits to Belgium, France and South Korea.

Most significant accomplishment of past year

Title » Description

» Establishment of the Computational and Operations Analysis Laboratory in the Management Science Graduate Program through the addition of workstation computers.

Willing to receive calls from the news media?

Yes

Willing to participate in the UT Speaker's Bureau?

No

Courses taught in last five years

Course Number » Title » Semester/Year » Credit Hours » Clinical Hours (Nursing only)

631 » Integer Programming » » 3 »

621 » Network Flows » » 3 »

505 » Operations and Logistics Management » » 3 »

681 » Vehicle Routing and Scheduling » » 3 »

534 » Application of Management Science Methods » » 3 »

301 » Principles of General and Operations Management » » 3 »

533 » Application of Management Science » » 3 »

Activity as an advisor for students or student groups

Title » Semester/Year » Description

Management Science Program Chair » Fall 1994 » Advisor to MS students

Student dissertations or theses directed

Student Name » Degree » Semester/Year » Thesis Title

Sepehri, Mehdi » Ph.D. » Fall/1991 »

Pillai, Rekha » Ph.D. » Fall/1992 »

Thomas, Ben » Ph.D. » Sum/1995 »

Mukund, Vanditha » Ph.D. » Spring/1995 »

Vicki Webster » MS » Fall/1993 »

Present or past post-doctoral associates

Name » Description » Duration

Zhan, Ben » Support for funded projects on GIS Analysis » 8/94-8/95

Books, articles, etc. printed in refereed publications

Year » Citation

1994 » C.E. Noon, J. Mittenthal, and R. Pillai, "A TSSP+1 Decomposition Strategy for the Vehicle Routing Problem," to appear in European Journal of Operational Research.

1993 » C. E. Noon, T. Chan, and G. M. You, "A Fast Lower Bound for the Minimum Cost Perfect 2-Matching Linear Program," **American Journal of Mathematical and Management Sciences**, Vol. 13 No. 3, 1993.

1993 » C. E. Noon and J. C. Bean, "An Efficient Transformation of the Generalized Traveling Salesman Problem," **Information Systems and Operational Research**, Vol. 31 No. 1, 1993.

1992 » J. Mittenthal and C. E. Noon, "An Insert/Delete Heuristic for the Traveling Salesman Subset-Tour Problem with One Additional Constraint," **Journal of the Operational Research Society**, Vol. 43 No. 3, 1992.

1991 » C. E. Noon and J. C. Bean, "A Lagrangian Based Approach to the Asymmetric Generalized Traveling Salesman Problem," **Operations Research**, Vol. 39 No. 4, 1991.

1991 » J. C. Bean, J. R. Birge, J. Mittenthal, and C. E. Noon, "Match-Up Scheduling with Multiple Resources, Release Dates and Disruptions," **Operations Research**, Vol. 39 No. 3, 1991.

1988 » J. C. Bean, S. Ryan, and C. E. Noon, "Selecting Tenants in a Shopping Mall," **Interfaces**, Vol. 18 No. 2, 1988.

Talks given at the invitation of meeting organizers

Month/Year » Location » Conference Title » Title of Talk » Author(s)

July/1989 » Toulouse, France » Laboratoire d'Automatique et d'Analyse des Systemes du CNRS »

"Match-Up Scheduling with Multiple Resources, Release Dates and Disruptions" » J. C. Bean, J. R. Birge, J. Mittenthal, and C. E. Noon

March/1990 » Troy, New York » Rensselaer Polytechnic Institute » "The Generalized Traveling Salesman Problem for Routing and Scheduling" » C. E. Noon and J. C. Bean

June/1991 » Montreal, Canada » Triennial Symposium on Transportation Analysis » "A TSSP+1 Decomposition Approach for the Capacity-Constraint VRP," and "A Cutting Plane Procedure for the Symmetric Generalized Traveling Salesman Problem" » C. E. Noon, J. Mittenthal, and J. C. Bean

March/1992 » Daejeon, South Korea » Korean Advanced Institute of Science and Technology » "The Generalized Traveling Salesman Problem and Its Applications" » C. E. Noon and J. C. Bean

March/1992 » Pohang, South Korea » Pohang Institute of Science and Technology » "The Generalized Traveling Salesman Problem and Its Application" » C. E. Noon and J. C. Bean

November/1992 » San Francisco, California » ORSA/TIMS Joint National Meeting » "A TSSP+1 Decomposition Strategy for the VRP" » C. E. Noon, J. Mittenthal, and R. Pillai

March/1993 » Washington, D.C. » Strategic Benefits of Biomass and Waste Fuels » "TVA GIS-Based Biomass Assessment" » C. E. Noon and M. Daly

June/1994 » Capri, Italy » TRISTAN II » "Lower Bounds for the VRP via TSSP-based Decomposition" » C. E. Noon

Honorary awards

Month/Year » Name of Award » Granting Organization » Description

1992 » **Outstanding Young Engineer Award** » Speed Scientific School, University of Louisville » Annual award to recognize industrial engineering department alumni.

1991 » **Allen H. Keally Outstanding Teaching Award** » College of Business Administration, University of Tennessee » Award for outstanding teaching presented to junior faculty.

1991 » **Outstanding Professor Award** » Delta Sigma Pi (Business honor society) » Outstanding teacher

Chanaka P. Edirisinghe

UTK Department(s)

Department Name » Percentage of Effort

Management Department » 100%

Campus Address and Phone

Room Number » Building » Phone » Fax

610 » Stokely Management Center » 974-1684 » 974-3163

E-mail Address

PA144918@UTKVM1

Start date at UTK

August 1991

Academic rank and professional title

Rank » Title

Assistant Professor » Dr

Previous Employment (other institutions)

Title » Institution » Department » Years

Research Associate » Asian Institute of Technology » Industrial Engineering and Management Division » 1

Assistant Lecturer » University of Sri Lanka » Engineering Mathematics » 1

Educational History

Degree » Institution » Year Awarded » Thesis Title

Ph.D. » University of British Columbia, Canada » 1991 » Essays on Multiperiod Stochastic Programming Problems

M. » Asian Institute of Technology, Bangkok, Thailand » 1985 » Optional Capacity for a Multipurpose Water Reservoir

BEng » University of Peradeniya, Sri Lanka » 1980 »

Additional Training

Mechanical engineer with 4 years work experience in maintenance and operation of steam and gas turbine power plants

Foreign language fluencies

Language » Read/Write (Y/N) » Speaking (Y/N)

Sinhalese » Y » Y

English » Y » Y

Professional collaborations with U.S. colleagues and students

David Gay, AT&T Bell Labs, and Derek Holmes, Univ of Michigan, on developing stochastic programming extensions of standard input data files in MPS format.

Research/implementation collaboration with Drs. Turner and Carino, Frank Russel Company, Tacoma, Washington.

International Collaborations

Prof W. T. Ziemba, University of British Columbia, Canada

Prof. D. R. Atkins, University of British Columbia, Canada

Prof. R. Uppal, University of British Columbia, Canada

Prof. P. Iyogun, Wilfrid Laurier University, Canada

Non-technical description of professional activities

Field » Keywords » Description

Stochastic Programming Models » Decision making under uncertainty approximations »

Multiperiod Portfolio Optimization » option pricing, inefficient markets, contingent liabilities »

Water Resources Optimization » Reservoir releases hydropower optimization, water distribution networks »

Health Care Planning & Risk Management » costing and pricing strategies, equitable risk allocation, vertical integration »

Most significant accomplishment of past year

Title » Description

Representing the US in the International Federation of Information Processing Workshop in Norway » was one of the 12 US researchers invited to present at the IFIP workshop in January 1994. The theme was "Stochastic Programming Models/Applications".

Willing to receive calls from the news media?

Yes

Willing to participate in the UT Speaker's Bureau?

No

Courses taught in last five years

Course Number » Title » Semester/Year » Credit Hours » Clinical Hours (Nursing only)

Comm 211, 212 » Probability and Statistics » 1989-91 » 3 each »

Comm 290, 291 » Decision Analysis (including theory and linear programming and applications) » 1989-91 » 3 each »

301 » Operations Management » Sp 92, F92, Sp93, Sp94 » 3 »

310 » Basic Management Science » F94 » 3 »

531 » Linear Programming » F92, F93, F94 » 3 »

651 » Nonlinear Programming » F91, F93 » »

533 » Linear Programming(under uncertainty) » Sp93, Sp 94 » »

Unpublished instructional materials

Title » Semester/Year » Description

Lecture Notes for Mgt 301 » Revised every year of instruction » supplementary notes

Mgt Sci 651 » Revised every year of instruction » A set of class supplementary materials

Activity as an advisor for students or student groups

Title » Semester/Year » Description

Option Pricing Models » Summer 93 » Modeling option pricing problems and solution methods

New Methods for Linear Programming » Summer 93 » New methods, based on interim and boundary points for solving linear programs

Student dissertations or theses directed

Student Name » Degree » Semester/Year » Thesis Title

Majano, Maria Ana » Ph.D. » Spring/1993 »

You, Guey-Mei » Ph.D. » » Second order approximations for multiperiod stochastic programs

Agarwal, Anurag » Ph.D. » » Vehicle routing with dynamic time windows

Mukund, Vanditha » Ph.D. » »

Wijenayake, Ajith » Ph.D. » »

Hild, Cheryl » Ph.D. » »

Xi, Chen » Ph.D. » »

Total number of publications

Refereed » Non-Refereed

1 »

Books, articles, etc. printed in refereed publications

Year » Citation

1987 » "A Modified Linear Programming Gradient Method for Optimal Design of Looped Water Distribution Networks", *Water Resources Research*, 23, pp 977-982, 1987 (with O. Fujiwara and B. Jenchaimahakoon)

1992 » "Tight Bounds for Stochastic Convex Programs", *Operations Research*, 40(4), pp 660-677, 1992 (with W. T. Ziemba)

1993 » "Optimal Replication of Options With Transactions Costs and Trading Restrictions", *Journal of Financial and Quantitative Analysis*, 28, pp 117-138, 1993 (with V. Naik and R. Uppal)

1994 » "Bounds for Two-stage Stochastic Programs with Fixed Recourse", *Mathematics of Operations*