



# IOWA SECTION MAA NEWSLETTER

Vol. I No. 1

Edited by D. V. Meyer

November 1984

## IOWA SECTION SPRING MEETING

Even though it is more than four months away, this is a good time to begin thinking about the Spring Meeting of the Iowa Section of the MAA at Drake University in Des Moines, April 12 and 13, 1985. Too often we get caught short when the call for papers comes out and feel there is insufficient time to work up the details of a paper we would like to submit. A little planning now may ease the pressures caused by time restrictions later and enable more of us to share our work and ideas with our colleagues.

As in the past, the section hopes to have a good selection of student papers. Encourage your better students to get started on projects they might be able to present at the meeting. It is anticipated that the section can award up to three free memberships in the MAA as prizes for the student papers presented at the meeting. The memberships include one free journal. In case a prize winner is already a member of MAA, an MAA-published book can be substituted for the membership.

Lets work to make the Spring Meeting full and stimulating. Everyone will benefit.

Alan Heckenbach  
Secretary, Iowa Section.

## CANDIDATES FOR OFFICE

Under the current by-laws of the Iowa Section of the MAA, it is the duty of the chairman to appoint nominating committees for the various vacancies. If there are those who wish to volunteer to serve on a nominating committee, wish to be considered for a particular office, or wish to suggest candidates, let our chairman, Professor Wayne Woodworth of Drake University, know.

## GOVERNOR'S REPORT

The Board of Governors of the MAA met on August 15, 1984, in conjunction with the joint AMS/MAA summer meetings, held on the campus of the University of Oregon in Eugene, Oregon. In addition to the usual items of business and committee reports, the Board took the following specific actions.

1. Professor Kenneth Ross of the University of Oregon was elected secretary of the MAA for the five year term, 1985-90.

2. The summer meeting site at the University of Wyoming, Laramie, for August 12-15, 1985, was approved.

3. A generous gift of \$20,000 from the Vaughn Foundation to help refurbish the Carraige House at the Association's headquarters was accepted. The Carraige House is adjacent to the MAA headquarters building in Washington, D.C. The Vaughn Foundation had previously contributed \$80,000 towards the original purchase of the MAA buildings. The Board expressed its deep, heartfelt appreciation to the Vaughn Foundation for its continued support.

4. The Board elected Gerald Alexanderson as editor of the Mathematics Magazine for 1986-1990. Professor Alexanderson is from the University of Santa Clara.

5. Professor John Jobe of Oklahoma State University reported on TEAM'S (Teaching Experiential Applied Mathematics) year one production and plans for year two. Three of the six learning modules are now available.

6. The Board approved in principle a MAA statement on the Retraining of Elementary and Secondary Teachers from other areas as qualified mathematics teachers. Joint statements from the MAA and NCTM will be forthcoming and will be sent to State Superintendents, Directors of Certification, and others.

7. Alfred Wilcox introduced Richard Witter, newly hired development officer of the MAA. Mr. Witter will work on the Greater MAA Fund and will develop a planned giving program for the MAA.

8. The Board heard a report by Professor Kenneth Hoffman who represents the mathematical community by developing contacts with the government agencies for science education funding - - the "Washington presence."

Donald V. Meyer, Governor  
Iowa Section, MAA

## FUTURE MEETING SCHEDULE

January 11-13, 1985	MAA 68th Annual Meeting Anaheim, California
April 12,13, 1985	Iowa Section MAA Spring Meeting Drake University      Des Moines, IA.
August 12-15, 1985	MAA Summer Meeting Laramie, Wyoming
January 9-11, 1985	MAA 69th Annual Meeting New Orleans, Louisiana

The International Congress of Mathematics will be held at the University of California, Berkeley, in the Summer of 1986. It is likely that any meetings that the MAA holds in the summer of 1986 will be held in conjunction with the ICM meetings.

## TEACHING EXPERIENTIAL APPLIED MATHEMATICS

MAA members may recall reading about the TEAM project in FOCUS. The program directors are developing six learning modules based on applied mathematics problems in industry. The first three modules are now ready.

Each learning module consists of a video cassette which introduces the problem in raw form, using on-site data; a resource book; a microcomputer software package on a diskette; and a second video cassette which presents the industrial solution to the problem. Each module will present students with learning materials and instructors with a strategy for an experiential approach.

The distribution of these materials is being organized by the MAA through TEAM leaders in each section. The Iowa Section Leader is Tom Iverson of Central College. He will introduce the materials to the section and describe the plan for making them available to individual schools throughout the section.

## A LITTLE SURVEY - - by DVM

How much activity is there in the mathematical sciences in Iowa? One measure - perhaps a very naive one - is simply the number of people that are being trained at our institutions. Below is a collection of numbers I received from the institutions that responded to my questionnaire. I realize that most of the colleges do not offer a separate major in statistics, but the universities do and thus I thought it should be included.

NUMBER OF GRADUATING SENIORS IN THE  
MATHEMATICAL SCIENCES 1983-84

SCHOOL	Computer Science	Mathematics	Statistics
Briar Cliff College	0	4	0
Central College	1	6	0
Coe College	16	10	0
Graceland College	0	8	0
Grandview College	3	0	0
Grinnell College	0	10	0
Iowa Wesleyan College	4	3	0
Iowa State University	.	20	10
Loras College	18	2	0
Luther College	12	25	0
Mt. Mercy College	6	1	0
Mount St. Clare College	0	1	0
Northwestern College	0	6	0
University of Iowa	90	23	10
Wartburg College	21	14	0
William Penn College	0	0	0

GRADUATE COLLEGE ENROLLMENTS/DEGREES

Some of our graduating seniors tend to look out of state when they apply for graduate work in the mathematical sciences and completely ignore opportunities within the state. I believe that is a mistake; students should be encouraged to apply both places. The table below certainly indicates that there is considerable research activity (at least doctorates are being completed) and lots of opportunity for support at the graduate departments within our state. (I did not receive a response from the Computer Science Department at ISU, but they do have an active graduate program.)

In the table below, Ph.D.'s means Ph.D.'s awarded in the 1983-84 academic year, Support means the number of teaching and research assistants supported in 1984-85, New Students refers to newly enrolled graduate students in 1984-85, and Ret. Students refers to the number of returning graduate students in 1984-85.

GRADUATE DEPT.	Ph.D.'s	Support	New Students	Ret. Students
ISU Mathematics	4	80	20	37
ISU Statistics	13	56	25	88
U of I Computer Sci.	1	54	33	109
U of I Mathematics	6	86	48	99
U of I Statistics	1	27	23	68

## VISITING LECTURER PROGRAM

Listed below is a collection of individuals that are interested in visiting other institutions and giving the indicated talks. It is the responsibility of each host institution to make arrangements with the lecturer(s) they select. It is the responsibility of the host institution to provide travel expenses and local arrangements for the lecturer. No honorarium is expected.

The levels at which the talk can be given are coded as follows.

Level 1 - Suitable for freshmen mathematics students.

Level 2 - Assumes calculus and linear algebra.

Level 3 - Appropriate for junior/senior mathematics students.

Level G - Designed for mathematics graduate students.

Note also that the preferred days of the week are listed (a T is Tuesday and Th a Thursday) and the maximum distance an individual intends to travel (a school within x miles).

Lecturer: A. M. Fink

Ph. 515-294-8144

Address: Department of Mathematics  
Iowa State University  
Ames, IA. 50011

Days Preferred: any weekday  
Within the State

## TITLES

- |  | Level |
|--|-------|
| 1. The Spherical Dipstick.                               | 1,2,3 |
| 2. Nim and Grundy Functions.                             | 1,2,3 |
| 3. One Dimensional Search.                               | 1,2,3 |
| 4. How large a city can an insecure police force patrol? | 1,2,3 |
| 5. Rigid Motions of a Plane.                             | 3     |
| 6. Round Heads have Higher I.Q.s than Squares.           | 1,2,3 |

Lecturer: Peter Flusser

Ph. 319-385-8021

Address: Iowa Wesleyan College  
Mt. Pleasant, IA. 52641

Days preferred: Th  
Within the State

## TITLES

- |   | Level |
|---|-------|
| 1. Why use three variables when one will do?                | 1     |
| 2. The reaction function: Can it predict election outcomes? | 2     |
| 3. Solving Cubics in Finite Fields.                         | 3     |

Lecturer: Richard A. Groeneveld

Ph. 515-294-5584

Address: 324 Snedecor Hall  
Iowa State University  
Ames, Iowa 50011

Days preferred: M F  
Within: 200 miles.

## TITLES

- |   | Level |
|---|-------|
| 1. Maximal Errors in Finite Population Estimation.                  | 3     |
| 2. Probabilistic properties of the Best n of a<br>2n-1 Game Series. | 3     |
| 3. Measuring Skewness.  | 3     |

Lecturer: Kenneth Heimes Ph. 515-294-5866

Address: Department of Mathematics Days preferred: W  
Iowa State University Within the State  
Ames, IA. 50011

TITLE	Level
1. Algorithms used by Hand Calculators	2

Lecturer: Charles H. Jepsen Ph. 515-236-2810

Address: Mathematics Department Days preferred: any weekday  
Grinnell College Within: 100 miles.  
Grinnell, Iowa 50112

TITLES	Level
1. Patriotic Mathematics: Some Problems Involving the Colors Red, White, and Blue.	1,2,3
2. Coloring Points in the Unit Square.	1,2,3
3. Coloring Points in the Projective Plane.	1,2,3

Lecturer: Howard Levine Ph. 515-294-8142

Address: Department of Mathematics Days preferred: M W F  
Iowa State University Within the State  
Ames, IA. 50011

TITLES	Level
1. Why are Uniqueness Theorems Important in Partial Differential Equations?	1,2,3
2. What is a Well Posed Problem?	1,2,3
3. An Illustration of the Use of the Computer to Guess a Theorem in Partial Differential Eq.	2,3

Lecturer: Charles Lindsay Ph. 319-399-8682

Address: Coe College Days preferred: any weekday  
Cedar Rapids, IA. 52402 Within: 100 miles.

TITLES	Level
1. Divergent Series.	2
2. Patterns of Problem Solving.	1

Lecturer: Paul Muhly

Ph. 319-353-6025

Address: Department of Mathematics  
University of Iowa  
Iowa City, IA 52242

Days preferred: Any weekday  
Within the State

TITLE	Level
1. Heisenberg's Uncertainty Principle, A Case Study in Applied Mathematics.	2,3

Lecturer: Dennis Roseman

Ph. 319-353-6889

Address: Department of Mathematics  
University of Iowa  
Iowa City, IA. 52242

Days preferred: Any weekday  
Within the State

TITLE	Level
1. Exploring 4-dimensional Space Knots	3

Lecturer: Kieth Stroyan

Ph. 319-353-6895

Address: Department of Mathematics  
University of Iowa  
Iowa City, IA. 52242

Days preferred: Any weekday  
Within the State

TITLES	Level
1. Calculus with Infinitesimals	2,3
2. Geometry and Microcomputers	1,2,3

Lecturer: Frank Sullivan

Ph. 515-628-5308

Address: Department of Mathematics  
Central College  
Pella, IA. 50219

Days preferred: T Th  
Within the State.

TITLE	Level
1. Elliptic Curves.	3

Lecturer: Henry M. Walker

Ph. 515-236-2812

Address: Department of Mathemaics  
Grinnell College  
Grinnell, IA. 50112

Days preferred: T Th  
Within the State.

#### TITLES

	Level
1. Mathematical Cryptanalysis.	1
2. Scheduling Algorithms in Computer Operating Systems: An Application of Calculus and Probability.	2,3
3. Probability and Calculus.	2
4. Sorting Algorithms.	1
5. An Introduction to Homotopy Theory.	3
6. Discussion of the new Advanced Placement Exam in Computer Science. For faculty or potential teachers.	

Lecturer: Thomas Whaley

Ph. 515-628-5305

Address: Department of Mathematics  
Central College  
Pella, IA. 50219

Days preferred: any weekday  
Within the State.

#### TITLES

	Level
1. Non-Intuitive Limit Problems.	1,2
2. A Computer Program for Linear Algebra	2,3

### NEWS FROM CAMPUSES

#### BRIAR CLIFF COLLEGE

Sr. Michelle Nemmers attended a Computer in Education Institute at the University of Dayton. She also completed a short course at the University of Evansville.

The Mathematics Department added a Discrete Mathematics course for the new computer science major, and an Applied Calculus course was added for non-majors.

Sr. Michelle Nemmers is currently on sabbatical at the University of Oregon. Harold Youtzy, who holds an M.S. in Computer Science from the University of Mass., will join the staff in January.

#### CENTRAL COLLEGE

Leland Graber took a three week summer course at Denison University on Systems Programming. Thomas Whaley and Agnes Andreassian completed the two-summer program of the Institute for Retraining in Computer Science on the Clarkson Campus in Potsdam, New York.



Two new courses that are being offered this year are Digital Systems and Introduction to Systems Software.

New faculty members include Frank Sullivan who joined the staff as an Associate Professor, and David Ewing who has a one year appointment replacing Donald Meyer who is on leave at Iowa State University.

Thomas Whaley received tenure.

#### CLINTON COMMUNITY COLLEGE

Dr. John Bonte taught at Iowa State University this past summer. His wife, Martha, also received a summer honorarium from ISU. She is an instructor in the Humanities and Social Science Department at CCC. Chuck Kolsrud studied this past summer at the University of Iowa, having received a summer honorarium from the Office of Community College Affairs.

Arthur C. Meyers, professor of mathematics and physics, resigned.

#### COE COLLEGE

Coe has upgraded the status of the computer science program. There is now a Department of Mathematics and Computer Science. New courses in the computer science curriculum include a two semester sequence in Pascal (to serve as the first two courses in the major or minor) and a one semester course in discrete mathematics to be required of all computer science majors.

The Math/Computer Science departments of Coe College and Cornell College are holding weekly seminar meetings for members of the respective faculties. These joint meetings alternate between campuses. The current topic of study is Number Theory and is being led by Ed Voss, Assistant Professor at Coe.

Ed Voss has resigned effective December 15, 1984 to take a research position with the Zoology Department at the University of Iowa. He will be working on computer image analysis. A replacement for Professor Voss is being sought.

Charles Lindsay will be serving as General Chairperson for the Regional NCTM meeting to be held in Cedar Rapids February 14-16, 1985.

#### GRACELAND COLLEGE

Ronald Smith completed the Ph.D. in mathematics at Iowa State University. Steve Murdock has been hired as an Assistant Professor.

## GRINNELL COLLEGE

Summer activities of the mathematics staff included the following. Charles A. Jones attended the first summer of the Institute for Retraining in Computer Science at Clarkson College. Arnold Adelberg, Charles Jepsen, and Anita Solow attended a Sloan Workshop on PASCAL at Grinnell College. Thomas Moore and Charles Jepsen attended a Sloan Workshop on decision analysis at Grinnell College. Henry Walker led a Sloan Workshop on BASIC at Grinnell College. Walker also worked on a book, Introduction to Computing and Computer Science, and served as a reader for the new Advanced Placement Computer Science Exam. Eugene Moore worked on a book, Convergence and Approximation. Emily Moore led a Mellon Workshop for the faculty at Grinnell College on computing. John D. Stone led a Sloan Workshop on PASCAL.

Two new courses have been added: Problem Solving and Computing - an introduction to the nature of problem solving which uses LOGO, and Automata, Formal Languages, and Computational Complexity.

The Department is holding a seminar in which the book Computers and Intractability, by Gary and Johnson, is being read.

Charles Jepsen will be on leave for the spring term, 1985. Kathleen O'Hara has been newly appointed as an Assistant Professor.

## IOWA WESLEYAN COLLEGE

Iowa Wesleyan has changed the Calculus I and II offerings to five hours each. They now offer a two semester sequence in Number Theory-Abstract Algebra which alternates with a two semester Foundations-Analysis sequence. They also offer a two semester sequence in the History and Philosophy of Mathematics.

## IOWA STATE UNIVERSITY - MATHEMATICS DEPARTMENT

Howard Levine worked at Lawrence Livermore National Lab in California this summer. Alex Abian presented a paper at the summer meeting of AMS/MAA in Eugene, Oregon.

New courses at ISU include Numerical Solutions of Partial Differential Equations, Numerical Methods of Optimization, Computational Complex Variables I, II, and Calculus for Economic Analysis I, II. ISU is also proposing to offer a new Masters of School Mathematics which is a new degree for in-service high school mathematics teachers. University Faculty and Regents approval are required.

The Departmental Colloquium Series is held weekly on Tuesday afternoon at 4:10 p.m. and features both local and outside speakers.

Richard Miller was awarded the honor of publishing the best paper in an IEEE journal for the past two years. Faculty at ISU received the following research support: Howard Levine and Paul Sacks have a research grant from the Air Force; Gary Lieberman has an NSF grant; Wolfgang Kliemann holds a research grant from the West German Government. In addition, Leslie Hogben, Roger Alexander, and Richard Tondra hold a teaching grant from FIPSE.

Promotions: Jim Murdock to Professor; Roger Alexander and Gary Lieberman to Associate Professor.

Leaves for the current year include the following. Irv Hentzel is taking a Faculty Improvement Leave this fall in Rome, Italy, and Art Gautesen will take a Faculty Improvement Leave this spring at Stanford University. Paul Sacks is on leave at Cornell University and Wally Madych is on leave at the University of Connecticut.

New staff members include the following. Tsu-Fen Chen is a numerical analyst who was previously at Carnegie-Mellon and has been hired as an Assistant Professor. Andrew Acker has been appointed as an Associate Professor. His area of interest is partial differential equations, and he comes to ISU from Karlsruhe, West Germany.

Visitors for the academic year include Wolfgang Kliemann from Bremen, West Germany, Donald Meyer from Central College in Pella, Iowa, and Johathan Smith from Great Britain.

#### IOWA STATE UNIVERSITY - STATISTICS DEPARTMENT

The Statistics Department holds a regular colloquium series which meets each Wednesday in Snedecor Hall at 4:10 p.m.

Staff additions include Carl Roberts who has been appointed as an Assistant Professor in a joint position with Sociology, and Noel Cressie who has been appointed as a Full Professor. The following people have been promoted to Associate Professor; Mach Shelley, Shashikala Sukhatme, and Stephen Vardeman. Jeff Goebel resigned to take a job in Washington, D.C.

#### LORAS COLLEGE

John C. Friedell, Professor, was a member of the University Mathematics Teaching delegation (MAA organized) that traveled to the Peoples Republic of China during June, 1983. He presented a talk to Chinese teachers and students in Beijing entitled, "New Applications Require New Tools." Sr. Kathleen Sullivan, R.S.C.J., completed the second summer of the IFRICS retraining in computer science program at Clarkson College in Potsdam, New York.

The Department has added two new courses in Statistics for the Health Sciences and Computer Graphics.

Marvin C. Papenfuss has been promoted to Professor. New appointments include Sr. Kathleen Sullivan as Associate Professor from Manhattanville College, Purchase, N.Y., and Sr. Harriet Holles as Assistant Professor from Clarke College.

#### LUTHER COLLEGE

Joyce Becker has been appointed to serve on two MAA committees. She has been appointed to serve as Mu Alpha Theta representative to the Committee on High School Contests under Chairman Steve Mauer, Swarthmore College. She is also serving on the newly created Committee on Junior High Mathematics Examinations under Chairman Tom Butts, University of Texas, Dallas.

The Junior High Committee is writing a test to be administered nationwide in the fall of 1985. The Junior High Committee had working sessions during the MAA/AMS Louisville, Kentucky meeting in January, 1984, and again during the MAA/AMS meeting in Eugene, Oregon in August, 1984.

Joyce Becker has been elected National Governor of Mu Alpha Theta, Region II. Mu Alpha Theta is the National High School and Junior College Mathematics Honor Society. Region II covers approximately 13 states in Central U.S.A. Mu Alpha Theta has over 2,000 chapters nationwide. She took office at the Mu Alpha Theta National Convention in New Orleans, Louisiana in August of 1984.

#### MOUNT MERCY COLLEGE

Gloria Drapac completed the second summer of the two summer program of the Institute for Retraining in Computer Science conducted at Clarkson College, Potsdam, New York.

Changes in curricular offerings include the following. The 4 s.h. Pascal course was restructured so that it now consists of a two-course sequence: Introduction to Programming with Pascal (2 s.h.) and Structured Programming with Pascal (3 s.h.). Introduction to Programming with FORTRAN and Introduction to Programming with COBOL were added to the course offerings under the general education requirements. A Discrete Mathematics course was added as a requirement for the computer science major.

#### MOUNT ST. CLARE COLLEGE

Mathematics Department Chairman Glen Just attended a microcomputer seminar on the use of microcomputers in education. Topics included college level CAI, computer based testing, and simulations in BASIC and PILOT languages.

The Department has added new courses in Calculus for the Social, Managerial and Life Sciences, Pre-Calculus, and Fundamentals of College Mathematics. Edward Bailey is a new instructor in mathematics and computer science. He holds an M.S. from the University of Illinois.

#### NORTHWESTERN COLLEGE

John Peterson and Gordon Brumels attended a summer conference on Integration of Natural Science Disciplines and Christianity, conducted by Dr. David Wolfe of Gordon College

John Allen is a staff addition, coming from Rensselaer Polytechnic Institute. Delmar DeBoer has resigned to return to Belmont College in Tennessee.

#### WARTBURG COLLEGE

Lynn Olson and Josef Breutzmann attended a Digital Equipment Corporation's class on VAX "Operating Systems Internals" on June 11-15 in Chicago.

Breutzmann and Olson organized and conducted two week long Wartburg Computer Development Workshops for Wartburg faculty and staff. The first was on use of the VAX-11/750 minicomputer and the second on CAI. The entire staff of the Mathematics and Computer Science Department participated in at least part of these workshops: Gregory Diercks, Glenn Fenneman, Christopher Schmidt, August Waltmann and William Waltmann.

On June 19 William Waltmann developed another test unit for the Development Department of the American College Testing Program to be used in the Preliminary Actuarial Examination.

The Small College Computing Symposium will be held on the Wartburg campus April 19-20, 1985.

Christopher K. Schmidt joined the staff as Associate Professor of Computer Science and Mathematics and Director of Academic Computing. Mark E. Reinhardt resigned to return to graduate school.

#### WILLIAM PENN COLLEGE

Deborah Trytten is a new addition to the Mathematics Department. She holds an M.S. in applied mathematics. Richard Mason has resigned.

The Department has recently added courses in Intermediate Algebra and Probability and Statistics.

## 1984-85 OFFICERS OF THE IOWA SECTION

Chairman	Wayne Woodworth Drake University
Chairman Elect	George Trytten Luther College
Secretary-Treasurer	Alan Heckenbach Iowa State University
Iowa Governor	Donald V. Meyer Central College

## ANNOUNCEMENT OF SUMMER PROGRAMS

The following three announcements have been copied (without permission) from the Newsletter of the Ohio Section of the MAA. Note that our campus news above indicates that several people from Iowa have been enrolled in various ones of these programs. If you are interested in any one of these programs, give one of the participants a call and quiz them concerning their experiences and impressions of the program.

## PRELIMINARY ANNOUNCEMENT

INSTITUTE FOR RETRAINING IN  
COMPUTER SCIENCE (IFRICS)

Under the auspices of the Joint ACM/MAA Committee  
on Retraining for Computer Science

The IFRICS program which began during the summer of 1983 under the direction of Ed Dubinsky at Clarkson University in Potsdam, New York was established as a response to the critical and growing shortage of college teachers of Computer Science. The program is designed to retrain faculty from other fields such as mathematics. The training takes place during two consecutive summers. During the intervening academic year, each participant is expected to teach a computer science course at their home institution and to complete a major programming project. The program prepares the participants to teach about half of the ACM 78 core curriculum in computer science. As they gain teaching and programming experience, participants are expected to be able to teach most of the undergraduate courses in computer science. The faculty, which is drawn from top institutions, consists of established computer scientists with solid research records who are outstanding teachers.

Beginning with the summer of 1985 a second campus of the Institute will be established at Kent State University, Kent, Ohio. This extension will be guided by the same principles and the standards of quality which have been demonstrated during the first two years of the program at Clarkson University.

## DATES:

Clarkson University	June 3, 1985 - August 2, 1985
Kent State University	June 17, 1985 - August 16, 1985

Interested candidates should write for more information and application forms to:

Ed Dubinsky, Director  
Department of Mathematics and Computer Science  
Clarkson University  
Potsdam, New York 13676

or

Darrell Turnidge, Director  
Department of Mathematical Sciences  
Kent State University  
Kent, Ohio 44242

ANNOUNCEMENT  
A SHORT COURSE ON DATA STRUCTURES  
FOR COLLEGE FACULTY

Sponsored by the Ohio Section of the MAA and Denison University

COURSE TITLE: DATA STRUCTURES

COURSE DESCRIPTION: The data structures commonly used in computer science (e.g. linked-lists, trees, graphs, etc.) and their applications will be studied. The course will consist of the implementation and analysis of algorithms used for the manipulation of data structures. The primary objective of the course is to enable mathematics faculty who already know how to program to teach an undergraduate course on data structures similar to CS7 of the ACM Curriculum 78 recommendations. The Pascal programming language will be used as the vehicle for algorithm implementation; those who are not fluent in Pascal should have sufficient expertise in another general-purpose programming language (e.g. BASIC or FORTRAN) to be self-sufficient.

TIME : June 10 - June 28, 1985

LOCATION : Denison University, Granville, Ohio 43023

INSTRUCTOR : Dr. Zaven A. Karlan, Mathematical Sciences Department  
Denison University Granville, OH 43023 (614)587-6563

PUBLICITY : Dr. Douglas Fairies, Mathematics Department  
State University Youngstown, OH 44555

LOCAL ARRANGEMENTS: Dr. Andrew Sterrett, Mathematical Sciences Department  
Denison University Granville, OH 43023 (614)587-6684

COSTS : \$975.00 for instruction, room and board.

TIME-TABLE :

I. March 1 (Fri.), 1985	Application Deadline
II. March 13 (Wed.), 1985	Notification of Acceptance
III. March 22 (Fri.), 1985	Deadline for \$100 Deposit (non-refundable)
IV. April 26 (Fri.), 1985	Deadline for balance due
V. June 9 (Sun.) PM, 1985	Registration
VI. June 10(Mon.)-June 28(Fri.)	Instruction

APPLICATION  
A SHORT COURSE ON DATA STRUCTURES  
FOR COLLEGE FACULTY

Sponsored by the Ohio Section of the MAA and Denison University

JUNE 10 - JUNE 28, 1985

NAME \_\_\_\_\_ PHONE Office \_\_\_\_\_ Home \_\_\_\_\_  
DEPARTMENT \_\_\_\_\_ INSTITUTION \_\_\_\_\_  
ADDRESS \_\_\_\_\_

BACKGROUND:  
COMPUTER SCIENCE COURSES TAUGHT - GIVE TITLE AND LEVEL (e.g. SECONDARY LOWER-LEVEL UNDERGRADUATE)

DO YOU EXPECT TO TEACH A COURSE ON DATA STRUCTURES AT YOUR INSTITUTION SOMETIME IN THE NEXT TWO YEARS? \_\_\_\_\_

HOW MANY FACULTY MEMBERS ON YOUR STAFF HAVE A MASTERS OR PHD DEGREE IN COMPUTER SCIENCE? \_\_\_\_\_

PREVIOUS COMPUTER SCIENCE COURSES TAKEN - GIVE TITLE AND LEVEL

KNOWLEDGE OF PROGRAMMING LANGUAGES - INDICATE NO KNOWLEDGE (N), FAMILIARITY (F) OR EXPERTISE (E).

BASIC	_____	FORTRAN	_____
COBOL	_____	PL/I (PL/C)	_____
Pascal	_____	OTHER	_____

KNOWLEDGE OF PASCAL: WHICH OF THE FOLLOWING FEATURES OF PASCAL HAVE YOU USED? INDICATE USED (U) OR NOT USED (N).

FUNCTIONS AND PROCEDURES	_____	ARRAYS	_____
RECURSIVE PROCEDURES	_____	RECORD DATA TYPES	_____
USER-DEFINED (ENUMERATED) DATA	_____	POINTER DATA TYPES	_____

MAIL TO: Dr. Zaven A. Karlan, Mathematical Sciences Dept.  
Denison University, Granville, OH 43023

## ANNOUNCEMENT

### A SHORT COURSE ON OPERATING SYSTEMS FOR COLLEGE FACULTY

Sponsored by  
the Ohio Section of the PMA and Bowling Green State University

#### COURSE TITLE: OPERATING SYSTEMS

**COURSE DESCRIPTION:** Operating system topics covered will include: the operating system nucleus, memory management, input/output, secondary storage management and resource allocation and scheduling. Some case studies will be considered. Course projects may include such tasks as writing device handlers and implementing new operating system commands. Participants should have assembler language programming experience and be familiar with fundamental systems programming concepts such as functions of assemblers and compilers. Course projects will be implemented using the C programming language; however, prior experience with the C language is not required.

**TIME:** June 10 - June 28, 1985

**LOCATION:** Bowling Green State University, Bowling Green, OH 43403

**INSTRUCTOR:** Dr. Ann-Marie Lancaster, Computer Science Department  
Bowling Green State University (419) 372-2337

**PUBLICITY:** Dr. Douglas Faures, Mathematics Department  
Youngstown State University, Youngstown, OH 44555

**LOCAL ARRANGEMENTS:** Joyce Keple, Office of Continuing Education  
Bowling Green State University (419) 372-0181

**COSTS:** \$975.00 for instruction, room and board

TIME-TABLE:		
March 1 (Fri.), 1985	Application Deadline	
March 13 (Wed.), 1985	Notification of Acceptance	
March 22 (Fri.), 1985	Deadline of \$100 Deposit (non-refundable)	
April 26 (Fri.), 1985	Deadline for Balance Due	
June 9 (Sun.), 1985	Registration	
June 10 (Mon.), 1985	Instruction Begins	
June 28 (Fri.), 1985	Instruction Ends	

## APPLICATION

### SHORT COURSE ON OPERATING SYSTEMS FOR COLLEGE FACULTY

Sponsored by  
the Ohio Section of the PMA and Bowling Green State University

June 10 - June 28, 1985

NAME \_\_\_\_\_ PHONE \_\_\_\_\_ OFFICE \_\_\_\_\_ HOME \_\_\_\_\_

DEPARTMENT \_\_\_\_\_ INSTITUTION \_\_\_\_\_

ADDRESS \_\_\_\_\_

#### BACKGROUND

ARE YOU A FULL-TIME FACULTY MEMBER? \_\_\_\_\_

COMPUTER SCIENCE COURSES TAUGHT - GIVE TITLE AND LEVEL.

DO YOU EXPECT TO TEACH A COURSE ON OPERATING SYSTEMS AT YOUR INSTITUTION SOMETIME DURING THE NEXT TWO YEARS? \_\_\_\_\_

HOW MANY FACULTY MEMBERS ON YOUR STAFF HAVE A Ph.D. DEGREE IN COMPUTER SCIENCE? \_\_\_\_\_

HOW MANY FACULTY MEMBERS ON YOUR STAFF HAVE A MASTERS DEGREE IN COMPUTER SCIENCE? \_\_\_\_\_

PREVIOUS COMPUTER SCIENCE COURSES TAKEN - GIVE TITLE AND LEVEL.

KNOWLEDGE OF PROGRAMMING LANGUAGES - LIST ALL PROGRAMMING LANGUAGES (HIGHER LEVEL AND ASSEMBLER) YOU HAVE USED. FOR EACH LANGUAGE, INDICATE YOUR LEVEL OF EXPERTISE WITH THE LANGUAGE (E.G. EXTENSIVE KNOWLEDGE, SOME KNOWLEDGE).

MAIL TO: DR. ANN-MARIE LANCASTER

COMPUTER SCIENCE DEPARTMENT  
BOWLING GREEN STATE UNIVERSITY  
BOWLING GREEN, OH 43403



## KEEP THOSE CARDS AND LETTERS COMING

The primary purpose of this newsletter is to keep one another informed concerning the mathematical activities occurring within our state. It is our hope to publish a fall and a spring issue each year. We thank those of you that have sent us material to include in this issue, and we hope that each reader will feel free to contribute to the newsletter in the future by sending us any information which they feel is newsworthy to the mathematical community and by returning questionnaires which we send to you from time to time. In the meantime we encourage you to share any reaction to this newsletter with us, share your praise or your (constructive, of course) criticism.

Is anyone interested in having a mini-course offered at the spring meeting, one that is similar in format to those offered at the annual meetings of the MAA? If so, what topic should be covered?

Use the form below to send us news for the spring issue. THANKS!

The Editorial Board

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Name

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Institution  
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News:

Return to: Donald V. Meyer  
Department of Mathematics  
Iowa State University  
Ames, IA. 50011