

**SOUTH DAKOTA
SCHOOL OF MINES
AND TECHNOLOGY**



RAPID CITY, SOUTH DAKOTA 57701

Secretary - Treasurer
Rocky Mountain Section
Mathematical Association of America

Editor
Pi Mu Epsilon Journal

David Ballew, Head
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June 18, 1984

Prof. Kenneth Ross
Secretary
Mathematical Association of America
Dept. of Mathematics
University of Oregon
Eugene, OR 97403

Dear Prof. Ross:

Attached is the report of the Committee on Sections for the Summer 1984 Board Meeting. You will find:

1. A summary of the Seventh Annual Report of the Sections.
2. My observations and summary of comments from that report.
3. A list of persons whose section secretary highly recommended as speakers. (I would ask that you make this available to the Program Chairman of the next National Meetings).
4. A blank copy of the report.

The Summer Section Officers Meeting will be held from 3:30 to 5:30 on Thursday, August 16. The committee invites all board members to attend. We have an opening discussion question of "How Can Sections Best be a Voice for Mathematics?" However, our discussions quickly become far ranging and I'm sure the board would find this a great contact with the problems/successes of the sections.

I will be in Eugene on Wednesday, August 15 if you feel that I should attend the Governor's Meeting. I wait to hear from you.

Respectfully,

A handwritten signature in cursive script, appearing to read "David Ballew".

Dr. David Ballew
Chairman
Committee on Sections

DWB:t11

Enc.

OBSERVATIONS ON THE SECTION OFFICERS SURVEY --

1. 25 of 29 sections responded to survey by June 15, 1984.
2. 6 sections have separate sessions for Dept. Representatives.
3. 8 sections have a meeting of Department Chairs.
4. 1 section has a meeting of "Zonial Reps".
5. 21 sections report very successful banquets or luncheons.
6. Only one section reports financial problems and is not able to carry through programs it feels are necessary. (Allegheny)
7. Question X of the survey asked what kinds of programs are usually successful at the Section Annual Meetings. The responses are:

Pedagogy and Math Education: 15

Expository: 18

Research: 8

Computer Related: 17

Applied Math: 9

History: 2

Other: 0

Three sections stated that they tried to balance their program.

One respondent noted that the success of a talk depended more on the speaker than on the subject.

8. Question XI of the survey asked what types of changes in programming had been observed in the past few years.

More undergraduate involvement: 17

More computer related papers: 13

More contributed papers: 8

Less technical papers: 7

No change: 4

More Applied Math: 4

More Invited Addresses: 3

Articulation with H.S.: 2

More Discrete Math: 1

More involvement with Legislature 1

9. Question IX asked if there were problems with which the Section needed help.
 - a. How do we get Ph.D. institutions to participate. This was specifically mentioned as a problem by 9 sections. Note that 11 sections rated participation by Ph.D. institutions as poor.
 - b. We need a national brochure listing mathematics requirements for degree programs.
 - c. We want a continuation of Section Officer Meetings at both National Meetings.
 - d. How do we increase attendance at the section meetings?

The Following Speakers and their talks were highly recommended by at least one Section.

Wilf, Herbert	Univ. of Penn	"The Exponential Formula"
Bentley, Jon	Carnegie-Mellon	"The Computational Discovery of Mathematical Laws"
Saaty, Thomas	Univ. of Pitt.	"Decision Making in Complex Environments"
Niven, Ivan	Univ. of Oregon	"Some Peculiar Properties of Rationals and Irrationals"
Feit, Walter	Yale University	"The Classification of the Finite Simple Groups"
Wolf, Jack	Univ. of Mass.	"Multiaccess Communications"
Page, Warren	NYC Tech College	"Intuitive and Counterintuitive Mathematics"
Teply, Mark	Univ. of Florida	"Finiteness Conditions and Torsion"
Ferguson, Pamela	Univ. of Miami	"Character Theory and Finite Groups"
Quine, J.R.	Florida State U.	"Length and Area"
Ritter, Gerhard	Univ. of Florida	"Topology, Algebra and Image Processing"
Kletzing, Dennis	Stetson Univ.	"Rational Representations of Finite Groups"
Maurer, Stephen	Swarthmore Coll.	"Discrete Mathematics in the First Two Years"
Thompson, Denisse	Manatee JC	"Mathematics Education in the Soviet Union"
Figg, Mary	--	"Aspects of Legislation Affecting Mathematics Education"
Pollack, H.O.	Bell Labs	"On the Addressing Problem in Loop Switching"
Alder, Henry	Univ. of Calif.	"How to Discover and Prove Theorems"
Ralston, Anthony	SUNY/Buffalo	"Is There a Discrete Mathematics Course in Your Future?"
Banchoff, Thomas	Brown Univ.	"Interactive Computer Graphics in Differential Geometry Teaching and Research"
Pederson, Jean	Univ. of Santa Clara	Any talk of her choice
Hilton, Peter	SUNY/Binghamton	Any talk of his choice
Niven, Ivan	Univ. of Oregon	Any talk of his choice
Schoenfeld, Alan	Univ. of Rochester	"Mathematical Understanding Through Problem Solving"
Keen, Linda	Lehman College	"Elliptic Functions Revisited"
Varberg, Dale	Hamline Univ.	"Pick's Theorem Revisited"
Kreider, Donald	Dartmouth College	"New Directions - New Challenges in College Mathematics"

Recommended Speakers continued --

Ross, Kenneth	Univ. of Oregon	Any Subject of His Choice
Agnew, Jeanne	Oklahoma State	Any Subject of Her Choice
Moursund, David	Univ. of Oregon	"Computer Graphics in Mathematics"
Hilton, Peter	SUNY/Binghamton	"Early History of Computers"
Henrikson, Bonnie	SD School of Mines and Technology	"Making Sense Out of Dollars: A Study of Faculty Salaries"
Lucas, Dean	--	"New Mathematical Techniques in Image Processing"
Wells, Ron	Rice Univ.	"Geometry and the Universe"
Steen, Lynn	St. Olaf	"1+1 = 0: Learning Our Lesson From the New 'New Math'"
Steen, Lynn	St. Olaf	"Math and Computer Science: A Case Study in Marriage and Divorce"
O'Hallovan, Peter	Australia	"The Problem of Problem Setting"
Schattschneider, Doris	Moravian College	"The Conway Criterion"
Heintz, Ruth	SUNY/Buffalo	"Do We Really Teach Problem Solving?"
Graves, Jack	Syracuse Univ.	"A Good Proof on Dimensions"
Gillman, Leonard	Texas Univ.	Any Subject of His Choice
Schacher, Murray	UCLA	"The Mordell Conjecture"
Birkhoff, Garrett	Harvard	Any Subject What-so-ever
Meyer, Carl	NC State/ Raleigh	Any Subject of His Choice
Burgstahler, Sylvan	U. of Minn/Duluth	"Solving Polynomial Equations"
Page, Warren	NYC Tech College	"Nearness Relations Among Measures of Central Tendency"

SUMMARY OF MAA SECTION REPORTS, 1984

SECTION	SIZE	NO. MTGS.	ATTEND.	MEETING HIGHLIGHTS	NEWSLT.	VIS. LECT. PROGRAM	REG. FEE	SECTION STRENGTHS	SECTION WEAKNESSES				PARTICIPATION		
									Ph.D.	2-yr.	4-yr.	Indus.	Undergrad		
Alleg. Mt.	403	1-2day	90	Good speakers and good panel discuss.	Yes(2)	Yes(0)	\$5	Excellent Section meetings	No short courses Little Partic. by Ph.D Universities	P 0% G 30% F 70%	G 0% P 0%	G 0% F 0%	3 pap		
E. Penn/Del	651	2-1day	179 90	Excellent Student papers. Theme was Math and Comm. Thy.	Yes(2)	No	\$5	Two regular mtgs.	None are apparent	F 8% G 10% P 80%	F 1% G 1%	F 1%	Yes		
Florida	504	1-2day plus 3 regional meetings	169 + 30 124 70	11 invited addresses on Special sessions on computing, discrete math. Undergrad stud. session (5 papers)	Yes(3)	Yes(?)	\$5	Annual Mtgs. plus Regional Meetings	Regional Mtgs are down from 7. Must maintain continuity (at Regional Meetings teachers is up to 30%)	G 30% F 35% P 28%	G 5% F 5%	F 5%	5 pap		
Illinois	929	1-2day	75	Well balanced prog.	No	Yes(35)	\$5	H.S. Math Contest Lecture Program	No Newsletter No Short courses	P 8% G 10% F 80%	P 1% F 1%	No.	No.		
Indiana	364	2-1day	36 40	Student speakers Book Pub. at Mtg.	Yes(2)	No	\$2	Holding Spring Mtgs. with Ind. Small Coll. Math Exam.	Small Attend. No support from large Univ.	F 14% P 18% G 30%	F 0% P 0%	P 2 pap	2 pap		
Interntn.	126								No activities other than annual mtg.	F 14% G 18% P 30%	P 0% F 0%	2 pap	2 pap		
Iowa	198	1-2day	49		No	No	\$2	Meet with Siam and ASA	Need more Partic.	F 25% G 25% P 50%	F 5% G 5%	None	None		
Kansas	217	1-2day	80	Discussion of Computer impact on Math. Curr.	Yes(1)	Yes(?)	\$4	Good Section Mtg.	(H.S. Teachers -- 25%); 's are ???	F 25% G 25% P 50%	F 5% G 5%	P 5%	None		
Kentucky	174	1-2day	88	Tony Ralston's talk on Discrete Math.	Yes(3)	No	\$1	Annual Meeting	Need more partic. by secondary and industry people	P 6% G 15% F 71%	P 0% F 0%	P 1 pap	1 pap		
La/Miss	327	1-2day	175	Mini-conf. funded by MAA on Develop. mathematics	Yes(2)	Yes(55) 63 requests	\$5	Annual Meeting	Lack of Partic. by some institutions	F 5% G 35% P 40%	F 15% G 15%	P 8 pap	8 pap		
Md/DC/Va	1,443	2-2day	120 210	Spring mtgs with AMS	Yes(2)	No	\$2	Spring mtg. with AMS	Lack of Partic. by Ph.D. Institutions	P 5% G 35% F 40%	F 15% G 15%	F 1 pap	1 pap		
Metro NY	1,049														
Michigan	581	1-2day	115	7 invited talks Special session on legislative issues involving educ.	Yes(2)	Yes(20)	\$5	Zonal Reps. Invol. with legis. issues. Connection with MCTM	Need better comm. with 2-yr. colleges.	G 6% F 15% P 71%	G 0% F 0%	P 3 pap	3 pap		
Missouri	319	1-2day	70	Annual mtg. with Missouri Acad. of Science	Yes(2)	Yes(18)	\$3	Meetings and News-letter	Lack of Partic. by Ph.D Univ. and by community colleges	P 5% G 35% F 40%	F 15% G 15%	F 1 pap	Yes		
Nebraska	112	1-2day	65	Met with Neb. Acad of Science	Yes(2)	No	No.	--	--	G 50% P 10% F 20%	G 20% F 10%	P 10%	--		

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									PhD	2-yr	4-yr	Indus.	PhD	2-yr	4-yr	Indus.
New Jersey	636	2-1day	70 70	Talk on trip to China. Motion supp. leg. to subsidize teachers for certification	No	No	No	High caliber of talks.	Low attendance	P 5% (H.S. was 15%)	G 40% F 35%	F 5% P 5%	P 5%	tried!		
N. Central	507	2-2day	78 119	Variety of talks.	Yes(2)	No	S3	Strong Partic. Variety of talks.	Distances. Lack of partic. by Ph.D Institutions.	P 5%	F 5% G 89%	P 1%	P 1%	2 pap. others attend.		
No. Calif	1,108	-----	---	-----	-----	---	---	-----	-----	---	---	---	---	-----		
Northeast	1,403	2-2day	90 112	Computer workshops. Student papers	Yes(2)	Yes(0)	S3	Short course Computer Workshops. Cont. papers Excellent programs Short courses. Math. contests.	Low attendance Communication between institutions. Lack of support from Ph.D. inst.	F/P 10% G 77%	P 3%	P 3%	3 paps			
Ohio	727	2-2day	103 122+ 52 stud.	--	Yes(3)	No	S2	Section Meetings Lots of people participate	Getting program complete on time.	F 25% G 75%	P 75%	P 14 paps.				
Okla/Ark	260	1-2day	125	Invited addresses	Yes(1)	Yes(54)	S5	Annual Meeting	No Annual meeting when National mtg. is in area.	G 50%	P 50%	P 7 paps.				
Pac. NW	784	1-2day	135	Short course on Computer Graphics	Yes	No	Yes	Membership interest	No Annual meeting when National mtg. is in area.	P 20% F 30% G 50%	P 1%	None				
Rocky Mtn.	335	1-2day	110	Invited addresses	Yes(4)	Yes(25)	S5	Excellent Mtgs.	Lack of partic. by Ph.D. Institutions	F 85%	P 85%	P 9 paps				
Seaway	1,179	2-2day	70 98	Excellent talks	Yes(2)	No	S4	Meetings	Little response to student session	F 20% G 60%	P 4%	4 paps				
So. Calif	1,111	2-1day	100 80	Excellent invited speakers	Yes(2)	No	S6	Invited addresses	Little outside activities	G 40% F 10% G 40%	F 10%	F 10%	Tried			
Southeast	1,330	1-2day	223	Outside speakers. Sessions on computers Contributed papers	Yes(2)	No	S4	Invited addresses	Lack of Partic. by large univ. Need more student partic.	P 15% F 65%	P 5%	P 1 pap				
Southwest	327	1-2day	20	--	No	No	S2	--	Poor attendance	P 35% F 10% G 50%	P 5%	P none				
Texas	874	--	--	--	--	--	--	--	--	--	--	--	--	----		
Wisconsin	359	1-2day	180	--	Yes(2)	Yes	S5	Discrete math workshop	--	F 5% G 5%	P 6 paps.					
<u>TOTAL</u>													3,724			

Seventh Annual Report of MAA Sections
Year Ending May 15, 1984

Name of Section: _____

Name and Address of Section Secretary preparing this report: _____

Name and Address of Section Representative who is to receive travel subsidy for Eugene meeting: _____

Section Office held by Representative _____

I. MEETINGS

(1) For each regular Section meeting held during the year please give:

Date(s) _____

Location(s) _____

Approx. Attendance _____

(2) Please describe any particular highlights or novel features of this year's meetings, and give some indication of their success. (If more space is needed for your response to this or other items, please continue on reverse side.)

(3) If your Section had any special meetings, please give date, location, purpose, and accomplishments of each such meeting. (Report workshops, short courses, etc. under III.)

(4) Does your Section have a meeting or session for MAA Representatives and/or Department Chairs?

MAA Representative: Yes No

Department Chairs: Yes No

- (5) Does your Section sponsor a banquet or luncheon for participants? _____
If so, is it successful? _____

II. NEWSLETTER

- (1) Does your Section publish a newsletter? _____ If so, how many times did it appear this year? _____
- (2) If the answer to (1) is "yes," please give the editor's name and address:

- (3) Does your newsletter take care of all regular communications within the Section? _____ If not, how many other general mailings are necessary during the year? _____

III. SECTION ACTIVITIES

- (1) Does your Section sponsor a Visiting Lecturer program for secondary schools in the region? _____ If so, approximately how many visits were made this year? _____
- (2) Does the Section sponsor a Visiting Lecturer program for colleges in the region? _____ If so, approximately how many visits were made this year? _____
- (3) Is the Section involved in other education programs or activities, either alone or in cooperation with other organizations? _____ If so, please describe: (If you have pertinent printed materials such as publicity brochures, please attach copies.)

IV. FINANCES

- (1) Do you charge a registration fee at Section meetings? _____ If so, how much for regular members? _____
For students? _____
- (2) Does your Section assess annual dues? _____ If so, how much? _____
- (3) Is the income adequate to meet the expenses of the present level of activities of the Section? _____
- (4) If the answer to (3) is "no," what steps are being taken by the Section to solve the problem? _____

(5) Are there specific activities you have wanted to undertake but have delayed or curtailed for financial reasons? _____ Please specify:

(6) Did your Section apply this year for a grant from the MAA's Fund for Aid to Sections? _____ Was the grant application approved? _____

If so, for what was the grant money used? _____

V. STRENGTHS AND WEAKNESSES

(1) On the basis of your Section's recent activities and present condition, what would you say have been its strongest features or most significant activities this year?

(2) What do you consider to be the weakest features or most serious problems facing your Section at this time?

(3) Please characterize as Good, Fair, or Poor the extent of participation in Section activity this year by members who are in the categories listed. Can you give a rough percentage of the number of meeting attendances in each category?

	<u>Participation</u>			<u>Approx. % of Attendance</u>
Ph.D. Institutions	G	F	P	_____
Two-Year Colleges	G	F	P	_____
Other Colleges/Universities	G	F	P	_____
Non-Academic Empl.	G	F	P	_____
High School	G	F	P	_____

- VI. Did your Section make any effort this year to include undergraduates on the program at a Section meeting? _____ If so, please give details (e.g. number of student papers, description of special activities for the undergraduate, etc.):
- VII. Does your Section assign a person or committee specific responsibility for membership recruitment? _____ If so, give the name, address, and title (membership chairman, 2nd VP, or whatever) of the individual with primary responsibility in this area:
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-
- VIII. Do you and your Section Chairman have in your possession the blue Handbook for Section Officers? _____
- XI. MAA program committees and other Sections are constantly on the lookout for superior speakers. Were there any outstanding persons on your program this year whom you would recommend for invitations to speak at National or Sectional meetings? _____ If so, please give the name and institutional affiliation of each such person together with the titles of talks and other pertinent information. Summaries of this item will be returned to you.

X. Which types of programs or papers seem to be the most successful at your meetings?
(Mark as many as you wish.)

1. Pedagogy
2. Expository
3. Research
4. Computer Related
5. Applied Math
6. Math Education
7. History
8. Other _____

Have there been any significant changes or trends in the types of programs presented over the past 3 to 5 years?

XI. The primary job of this committee is to help Sections maintain and increase their effectiveness. Are there things you think we might do which would be of help to your or other Sections? Please be as specific as possible, both in identifying problem areas and in suggesting how we might help.

XII. Many Sections have developed written guidelines and/or procedures that have been proven very helpful and useful; i.e. guidelines for host institutions, job descriptions of section officers, etc. Would you send me any such materials you or your Section have developed? The Committee on Sections would like to distribute such materials and ideas to all Sections.

XIII. Please attach a copy of your Section programs to this report.

MAIL TO:

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South Dakota School of Mines and Technology
Rapid City, South Dakota 57701