

FILE

ASSOCIATION FOR WOMEN IN MATHEMATICS

NEWSLETTER

Speakers Bureau
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REPORT FROM THE PRESIDENT

As newly installed third president of AWM I would like to express, for myself and for all AWM members, our deepest appreciation and thanks to Alice T. Schafer for the superb job she has done as president of AWM. Under Alice's direction, AWM has continued to grow into a strong and vital organization, now with about 1000 members.

It is clear that AWM now functions effectively on a variety of levels with the aim of meeting our continuing goals: to improve the position of women in mathematics and to encourage women to study mathematics and seek careers in mathematics. The Newsletter, serving as a forum, a source of information, and a channel of communication, has fostered a real sense of community among us with room for many points of view. Increasing participation and interest is further evidenced by the large attendance at our national meetings, to wit the overflow crowd at our last January meeting in Washington.

In the political and legal arena, AWM, serving as the main advocate for women in mathematics, has been active in various ways. In these endeavors, we have been able to call on the support and resources of other professional organizations (e.g. we have discussed various matters with AAUP and LAW lawyers). AWM is now investigating several serious instances of discrimination and illegal hiring practices. We have submitted information to a Congressional committee investigating university affirmative action hiring plans. Included in our testimony is AWM's important analysis of AMS data (see EMPLOYMENT OF WOMEN IN MATHEMATICS DEPARTMENTS by Judy Green in the April Newsletter) showing "that in most instances the percentages of women in the mathematics faculties of American colleges and universities are going DOWN." For example, in the 27 most prestigious departments, the percentage of women on the faculty in 1974-75 was 2.8% which was down from 3.3% the previous year.

For AWM to remain viable and to be truly effective these functions must be continued and expanded. For example, AWM must seek funds (from its membership and from governmental and foundational sources) to supply research and travel grants, to finance a legal defense fund and to support a paid part-time staff (see Alice's REPORT FROM THE PRESIDENT and Judy Roitman's LETTER TO THE EDITOR in the May-June Newsletter). AWM must continue to monitor the hiring practices of institutions employing mathematicians and insist on AWM representation on hiring committees with poor past performance records. AWM must explore and supply information about viable alternative (e.g. non-academic) sources of employment. Along these lines, the topic for our January, 1976 panel (in San Antonio, Texas) will be: Women Mathematicians in Industry and Government. If you are knowledgeable about this area and would like to participate, or have any suggestions, I would appreciate hearing from you.

Open Executive Committee Meeting

AWM will hold its first Open Executive Committee Meeting on Tuesday evening, August 19, 7:30-9 at Kalamazoo. The exact location will be announced at the AWM panel discussion and business meeting earlier that day (see Announcements at the end of this Report and also the NOTICES of the AMS).

As announced in last month's Newsletter, this will be a working meeting to discuss AWM policies and procedures and make plans for future actions. Some of the issues raised above will be discussed as well as related and important questions raised by Judy Roitman in her letter to the editor (May-June Newsletter). If you have any specific suggestions to be included in the agenda please let me know. We hope to get as much input as possible. Many members have already written expressing interest in participating and we are looking forward to seeing you there.

Lenore Blum

Home address: 700 Euclid Avenue
Berkeley, CA 94708

REPORT FROM THE PAST PRESIDENT

The purposes of this report are two-fold: to welcome the new President of AWM and to report on the activities of the President's office between the time the May-June Newsletter went to press and July 1 when the new President assumed office.

Welcome to AWM's new President, Lenore Blum of Mills College! Lenore is not a newcomer to AWM nor to the work of the Association. She has been on the Executive Committee for the past year and a half and was active in AWM in the Berkeley area before that. Since her election to the Presidency this past spring, she and I and members of the Executive Committee have been in communication and consulted on decisions that had to be made before July 1. We are confident that AWM will prosper and continue to grow and to serve the needs of women mathematicians under Lenore's guidance. Best wishes, Lenore!

Representative from the West

Congratulations to M. Susan Montgomery, University of Southern California, who is the newly elected Representative from the West on the Executive Committee! Her term is a four-year one, 1975-79. Susan replaces Lenore who was the Representative from the West until she assumed the duties of the President.

Representative to MAG

Sandra Pulver, Pace University, New York, has volunteered to be the AWM Representative on the Steering Committee of MAG (Mathematicians Action Group). Thank you, Sandra. We look forward to your reports on issues of mutual interest to AWM and MAG.

Application for affiliate membership in CBMS

AWM's application for affiliate membership in the Conference Board of the Mathematical Sciences has been approved by five of the six constituent members of CBMS: AMS, ASL, IMS, NCTM, and SIAM. It remains for MAA to vote. At the MAA January 24, 1975 meeting of its Board of Governors the following motion was passed:

The Board of Governors requests the Conference Board of the Mathematical Sciences to establish criteria for admission of new affiliate members, including, specifically, length of existence of the organization, size of its membership, national versus regional character, objectives of the organization.

At the CBMS Council meeting on January 26, 1975 a motion that CBMS accept the MAA request carried and a committee of CBMS has been appointed to study the problem.

At the August meetings in Kalamazoo the MAA Board of Governors meets before the CBMS Council so that it is possible that MAA might not vote on affiliate membership for AWM before MAA's January 1976 meeting. AWM is urging MAA President, H.O. Pollak and CBMS Chairman Burton H. Colvin to arrange meetings, consultations, or whatever is necessary to insure that MAA votes in August on affiliate membership for AWM in CBMS. (See the Report from the President in the March 1975 Newsletter on this whole matter. One wonders if the application of the Midwest Category Seminar for affiliate membership in CBMS was made purposely to try to keep AWM from attaining affiliate membership in CBMS.)

Nomination by petition for officers of the AMS

AWM member Joan Birman has been nominated by the AMS Council for member-at-large of the Council. The AMS allows additional nominations by petition for the positions of vice-president and member-at-large of the Council. This year two vice-presidents are to be elected for a period of two years and five members-at-large elected for a period of three years.

Mary W. Gray will be a nominee-by-petition for a vice-president of the AMS. In order to be nominated by petition at least 50 members of the Society must sign a petition for the candidate. A sample petition appears on page 191 of the June AMS NOTICES and instructions for signing it are given on p. 190. If you want to obtain signatures on a petition for Mary, note the instructions, and due date (August 11) for submission of petitions to the Secretary of the Society.

AWM member Harriet M. Lord will be a petition candidate for member-at-large of the AMS Council. The same instructions pertain to petitions for candidates for this position as do for the position of vice-president.

AWM member Chandler Davis is a petition candidate for the position of Member of the Nominating Committee of the AMS if that is allowed. See the June AMS NOTICES, page 192, for details on the status of this situation. Instructions for submitting petitions for nomination for this position are the same as the two above except that 100 signatures are needed for an individual to be nominated. .

We hope that you will support the AWM members who are candidates for AMS offices.

I should like to draw your attention to the summary of the January 1975 AMS panel discussion on non academic employment which appears in the June NOTICES (pp. 181-185).

The program of the AWM meeting to be held in Kalamazoo on August 19 at 3:30 pm appears later in the Newsletter. We hope to see you there.

Alice T. Schafer

LETTER FROM LONDON

17 June

In a book touted as a guide to Americans in Switzerland by a pamphlet available at the U.S. consulate in Zurich, the list of topics to be avoided in conversation with the Swiss is headed by "women's lib". Here the Women's Liberation Movement is sitting in the Home Office to protest the inadequacies of the Sex Discrimination Bill scheduled for its final reading in Parliament soon. One feature of the women's movement in Europe seems to be its use of the women's lib label we now avoid.

The response of most mathematicians here when asked why there are no women professors of mathematics in the U.K. is to point out that there aren't very many new professors (because of the difference in the significance of the title).

At a celebration of Littlewood's 90th birthday last week in Cambridge, Dame Mary Cartwright was a featured speaker. To expressed wonderment that she was, in spite of widely acclaimed mathematical achievements, never a professor, the answer is that her position (as head of a college) was more prestigious than that of a professor. But the two are not mutually exclusive.

During the recent AAUP Annual Meeting in Washington I talked with the head of the Association of University Teachers for the U.K. He says that his union does not concern itself with the apparent discrimination problems because there has been no pressure from its members to do so. One reason seems to be the dearth of women members; only university faculty are included, and those at the polytechnics, teacher-training colleges and other institutions of higher education which tend, as in the U.S., to have a larger percentage of women on the instructional staff, are excluded.

I have found many more women students in math, both undergraduate and graduate, than I would have imagined from the composition of faculties in the European countries. At a geometry seminar at the University of Leuven (Belgium) all five graduate students were women. There do not seem to be any statistics on, e.g., the percentage of Ph.D.'s in math going to women, but the overall impression is that the blocking of access to professional achievement is generally greater for women doctorate holders in Europe than in the U.S.

The recent AAUP meeting produced some action on several fronts of interest to women in academe. First of all, another resolution was passed committing the organization and its Committee A (on academic freedom) to aiding victims of discrimination - in fact to seeking out such victims and proffering assistance. Committee W is trying to keep an eye on Committee A activities in this area; in particular we are working on some guidelines advising women how to present their cases and outlining options for seeking redress. These should be ready by Fall and we welcome assistance in this matter.

Second, we are finally getting around to formulating a comprehensive policy statement on parttime employment in conjunction with various other committees of AAUP. We intend to deal with issues such as tenure - in particular the length of the probationary period, shifts in status, compensation (including fringe benefits); and participation in department and institutional governance. If you have areas of particular concern or suggestions to offer, please let me know.

In connection with the issue of the length of the probationary period, the Association is restudying its policy of insisting on credit for prior service; you may want to comment on this.

Committee W is continuing its policy of testifying on matters of its concern and expertise. I urge AWM members to keep themselves informed on pending federal and state legislation and to correspond with their representatives or to visit district offices. A very good feature of the recent AAUP meeting was a day spent on Capitol Hill visiting Senators and Congressmen. It is

too bad that a similar project was not organized in conjunction with the AMS-MAA-AWM meeting in Washington last January.

My address until mid-August is 26 Westbourne Terrace, London W2, phone 262-7632. I intend to be at the Kalamazoo meeting and hope to see many of you there. Meanwhile, I intend to be a petition candidate for AMS vice-president and would appreciate your support. If you are an AMS member, you can sign (and circulate) a petition which must reach the AMS secretary, Everett Pitcher, Lehigh University by 1 August.

Mary Gray

COMING IN THE SEPTEMBER-OCTOBER NEWSLETTER

Report on the AWM meeting in Kalamazoo

Report on the AMS Council meeting in Kalamazoo

Article: Survival of the Fittest by Everywoman, Ph.D.

THE LIFE OF A MATHEMATICAL COUPLE

by Harold Stark

Updated to 1975 from a panel discussion at the Missoula summer meeting in 1973

First, let me tell you a little about us. We were married in 1964, shortly after Betty received a B.A. from U.C.L.A. and I received a Ph.D. from Berkeley. We went to Michigan where I was an instructor and Betty a graduate student. Our one child was born in 1969 and Betty received a Ph.D. in 1971. (Contrary to the opinion of one chairman, Betty did not have a glandular change when Pearl was born and drop out of mathematics.) We are now in the Boston area. I have a tenured position at M.I.T. and Betty has a non-tenured position at Northeastern.

The household chores are a nuisance, since neither of us has an excuse to palm them off on the other. Some chores are handled by one or the other of us (e.g. I do the shopping and laundry, Betty does the cooking), some chores are farmed out (we have a company of cleaning men) and some chores have been proclaimed unnecessary (e.g. ironing and window washing). Mathematical work with an awake child present is very difficult although now that Pearl is 5½, it is at least possible for one of us if the other is present. We have had a babysitter since Pearl was born; we pay more than the minimum wage and have had no trouble getting or keeping good babysitters. Next year, Pearl will go to a day care center located in her elementary school. She has been going twice a week this year and loves it.

Our major problem is the attitudes of colleagues and their spouses (and of course, relatives). Betty has borne the brunt of this. One wife informed Betty at a party in Michigan that she had seen Betty on the campus and Betty had looked just like a student (I don't believe it was meant as a compliment). There are all sorts of pressures on the woman to quit. Some imply that women aren't any good, so why bother? I would place the familiar (at least to us), "There aren't any women good enough to be in our department" in this category. Others relate to children. A typical comment before Pearl was born was, "Just wait until you have a child, then you won't be able to continue." After Pearl was born, the comments were of two types: "Just wait until she walks and talks, then you won't be able to continue" and, "Why did you have a child anyway, if you wanted to work?" Also prevalent before HEW were gems like, "I don't hire women because they quit to have families." One chairman explained this by citing an example from twenty years earlier. The same chairman informed Betty that he also wouldn't hire women because everytime their children have colds, the women wouldn't come in.

There have been pressures on me to do what is best for me professionally and ignore Betty. These pressures were at their worst at the end of our second year in Michigan when I took a job in Dearborn so that Betty could continue in graduate school. One chairman could not believe I would not go to the best place available because of my wife. He told me a

story of a man who had been let go because he helped his wife with the housework! The M.I.T.-Harvard-Brandeis group causes us more problems than the Northeastern group. One professor here informed Betty that no woman is good enough to be in his department. Another time, at a colloquium party for a visiting group theorist (Betty's field) which I did not attend, several people did not believe that Betty could be there without me. "What, a Northeastern professor here?" "Oh, she's married to Stark." "Well, where's he?"

These are the major problems relating to our life as a couple. Both of us also have the usual problems of teachers. These have nothing to do with us as a couple, except that perhaps each of us understands better what is happening to the other.

WOMEN - AND MATHEMATICS, PHYSICS AND TECHNOLOGY?

WOMEN - AND RESEARCH?

Part VII by Else Hoyrup, Mathematics Institute,
Copenhagen University
(Translated by John Lamperti, Dartmouth

7. Women and Research (Final Installment)

In Copenhagen University women make up 16% of the total number of scientific workers, including the undergraduate teachers (1972). If one turns to the scientists with permanent positions the number decreases, and it continues to dwindle as one looks higher up in the hierarchy until finally one finds that only 2% of the professors are women.*3 (There were 6 women professors in 1972.) In the medical faculty and at the Polytechnical Institute there are, to my knowledge, no women professors at all.

The reasons why there are so few women working professionally in science are not altogether easy to unravel, since no one has ever been able to show that women are less gifted than men (although it is clear that women receive less training in using their intellectual capacities than men do). Discrimination certainly plays a role, especially in the decrease in the number of women as one moves upward in the hierarchy, but direct discrimination is not the only factor. All in all, one must say that there is an interplay among many different factors.

1) At the university undergraduate level there are already fewer women than men in most subjects (the exceptions are languages and psychology). This is certainly connected with the sort of girls' upbringing discussed earlier, which restricts girls' intellectual development and directs their attention toward "feminine" pursuits. (Languages and human science (psychology) can be included in this category to a certain extent.)

Girls simply do not receive encouragement and support for intellectual work. Moreover, intelligence is almost considered to be a male secondary sexual characteristic--on a par with, or perhaps an alternative to, hair on the chest. Correspondingly, a woman's intellectual achievements seem to arouse a little of the same suspicion about her femininity as would a good deal of hair on her chest! (See the American example in section 6.) What won't men as a group do to uphold their superior position, and along with it their privileges!

It is also so obviously easy for girls to give up along the way in their studies and go over to the housewife and mother role. Girls are simply not brought up to take non-feminine work seriously (when they do it themselves, that is), and others around them (first parents, later classmates, university teachers and husbands) usually do not take work by women nearly as seriously as men's. Young women are often treated very sentimentally and without respect; they are "sweet (perhaps lovely) creatures", whose work one need not take seriously. If there is one thing that can retard a person's development, it is the continual experience of not having one's work taken seriously. This, and the "definition" of intellect as a specifically male characteristic, together constitute one of the main reasons why women drop out from university studies and the like more often than men do, and why so few women students qualify for research--as well as why such a small part of the research staff in Denmark is composed of women.

As a consequence of the ideas that women by definition lack any special intellectual capacity and that women's work need not be taken seriously, women frequently find that the abilities which they actually have in various areas are under estimated just because they are women. And this holds for both men and women. The under-evaluation occurs in the economic world, in art and in science. It is this systematic under-estimation which is behind the famous (or infamous) psychological study in which university students were made to judge a literary text. When the students were told that the author's name was John Smith, the text was judged to be original, but when the author was given as Joan Smith the same text was considered unoriginal. It is not so strange that most women feel that they need to be far

more capable than men in order to make out equally well!

2) When a woman student or untenured university teacher marries and has children, her total work load usually becomes much greater than that of her male fellow students or colleagues. Even though the men may be married, there are (especially if there are children) very few of them who do as much of the housework as their wives. Relatively often the wives of university teachers are school teachers with relatively short working hours at the job, or they have part-time outside jobs or none, and so the practical side of the men's existence is easier. A woman research worker, on the other hand, is usually married to a male researcher, and if there are children in the marriage both partners have very busy working days. (One must say, however, that such marriages are usually among those with the greatest equality between the partners.)

Altogether, the total work-burden on women students and university teachers with small children is so great, that they have less concentrated working time "left over" for their research than do men, especially since many of them are raised to put the home before their studies or outside work. This means that women in the decisive years before obtaining a permanent university position--that is, toward the end of their student period and while holding untenured jobs--are handicapped in the "competition" in comparison with men. The same phenomenon is also a factor in promotions.

A large number of the women who are interested in research therefore feel compelled to postpone having children because of the competitive situation. This is a rather inhumane demand to make in many cases, and it is a demand which is not made upon male students and academic workers. The hard fact, however, is that many young women who would like to do research, but who bear children before getting a tenured job, never do manage to obtain a permanent research position.

3) It is striking that a large proportion of the (few) women who are actively engaged in research were directly urged to begin by male teachers and colleagues, and that they usually have parents and husbands who have actively supported them in their intellectual work. But only a fraction of the able women students are so fortunate. Indifference and opposition from parents, friends or teachers have discouraged a great many capable women, so that they never reached a stage where they could test their powers in a research situation and so never had a chance to choose a research career.

As far as I can see, the following personal characteristics are usual in those women whom male teachers encourage to do research: in part ability and an interest-arousing appearance, in part also an exciting personality and an active nature, one not easily dispirited. Neither appearance nor personality, however, seem to be absolutely necessary for a male researcher, and even a tendency to discouragement can in his case be compensated by ability.

4) If one investigates the circumstances of female mathematicians and physicists who work at higher educational institutions in Copenhagen (not necessarily with research jobs), it is equally striking how much the personalities and family backgrounds of these women differ from the traditional feminine pattern. Broadly speaking, it appears that they are far more active, independent and outwardly self-confident than either women or men normally are. And either "despite" a feminine exterior they are unusually tenacious, or they are what one in the case of women regards as somewhat domineering and a little aggressive. Moreover, these women have husbands who take an active part in the work of the home and consider this quite natural, and their husbands fully support the wives' intellectual work. In addition, their parents supported their intellectual development to a more-or-less great extent, and most of the women played with boys a great deal when they were small.

I know, finally, three women mathematicians and physicists whose parents had once wished that they had been boys who could become engineers--and who to a certain extent brought up their daughters according to that old desire.

*3 In the Danish university, many teachers at a level comparable to our assistant professor rank have tenure. Promotion to higher ranks is however not simply a matter of seniority, as it tends to be in this country once tenure is achieved, and many competent scholars never become professors (Tr.).

This publication is on file at the Women's History Library, 2325 Oak Street, Berkeley, CA 94708

Senator Edward M. Kennedy, Chairman of the Special Subcommittee on the National Science Foundation of the Senate Committee on Labor and Public Welfare, wrote to Dr. H. Guyford Stever, Director, NSF on June 10, 1975 expressing his concern that the Foundation did not include in its proposed plans for 1976 a substantial program for encouraging women to enter careers in science. Kennedy was preparing for the House-Senate Conference on the NSF authorization. You may want to ask Senator Kennedy's office for a copy of his letter and also to write to Dr. Stever supporting Senator Kennedy's position.

There is a new national monthly newsletter, The Spokeswoman, advertised as a "practical and fact-filled guide for active and responsible women", giving information on your legal rights, your fringe benefits, etc. Address: 1957 73rd Street, Chicago 60649.

The NOW Legal Defense and Education Fund publishes Peer Perspective. The June 1975 issue was devoted to the Title IX Regulations. FREE. Write to PEER, 1522 Connecticut Ave., N.W., Washington, D.C. 20036.

The American Mathematical Association of Two-Year Colleges is holding its annual convention in Chicago, October 29-November 1. One of the topics to be discussed is the content of a modern introductory calculus course. In support of this talk the Association is requesting instructors to send copies of their calculus final examinations to: Calculus Tests, Mathematics and Physical Science Division, Harper College, Palatine, IL 60067.

JOB^{****}S

JOB^{****}S

The vacancies listed below appear in alphabetical order in an alphabetical listing of states, followed by Canadian listings.

Talladega College, Instructor, one yr. only. Rank & salary open. Teaching load includes one Freshman course, one calculus course and probably one advanced course in area of instructor's interest. Mathematics instructors are expected to learn BASIC and use the computer in their Freshman courses especially. A Ph.D. is not required. Send curriculum vita and two or more letters of reference to: Dr. Robert P. Walker, Head, Dept. of Mathematics, Talladega College, Talladega, Alabama, 35160. Applications will be considered as late as August 1.

University of Alabama. Instructorship in Math. This is primarily a teaching position requiring 9-12 hours in the classroom per week. Master's Degree in Mathematics required. Send resume and have 3 letters of recommendation sent immediately to: Dr. Peter G. Casazza, Chairman, Dept. of Math., University of Alabama in Huntsville, Huntsville, Alabama, 35807.

College of San Mateo, Dean of Instruction, starting date Sept. 15, 1975. Candidates must have a Master's Degree minimally and an earned doctorate is desirable, but not required. They are looking for applicants with successful college administrative and teaching experience. Candidates must hold or be eligible to acquire the appropriate California Community College Administrative Credential. The Dean of Instruction reports directly to the college president, assuming full responsibility for planning, organization, administration, and professional leadership of the college instructional program. In addition, the Dean of Instruction directs development and supervises administration and control of the instructional budget. Salary is a six-step range beginning at \$30,680. Correspondence, including a detailed resume and a list of five references, must be received by August 1, 1975, and should be sent to: Dr. David H. Mertes, President, College of San Mateo, 1700 West Hillsdale Blvd., San Mateo, California 94402.

Yale University, Assistant Professor. Applications are invited for an assistant professorship in algebraic topology. Three-year appointment starting July 1, 1976. Applicant should have received Ph.D. between 1972 and 1975 and should have published work of high quality, and will be expected to continue to be active in research. Proven effectiveness in teaching at undergraduate and graduate levels should be among qualifications. Submit vita, copies of publications, names of three references (not letters) before October 1, 1975 to: Prof. W.S. Massey, Chairman, Search Committee, Dept. of Math., Yale University, New Haven, Connecticut 06520.

Defense Intelligence Agency. The DIA has current vacancies for computer programmers and a mathematician. These positions are located in the Pentagon and nearby Arlington, VA suburbs. Civil service status is not required. All applicants must be U.S. citizens and are subject to a thorough background inquiry and medical examination. Send a completed Personal Qualifica-

-flons Statement, SF171 to: Defense Intelligence Agency, Civilian Personnel Division, Recruitment Branch PM-1D, The Pentagon, Washington, D.C. 20201.

Postal Rate Commission, Statistician, grade, GS 9-11. Candidates must have a combination of experience and education totalling 6-7 years, and should have a bachelor's degree with courses in statistics totalling 15 hours and 9 additional hours in courses in which the content was involved with statistical method, or completion of all requirements for a graduate degree in statistics. 1-3 years of specialized work experience may be substituted for education. Duties include assisting senior staff through the performance of statistical analyses investigating the interrelationships among postal costs, rates, classifications and demand of mail users. Submit PRC Form 16 to Administrative Office, Attention: Mr. Pittack, Office of the Acting Special Assistant, Postal Rate Commission, Washington, D.C. 20268.

Idaho State University, Visiting Faculty Member in area of Numerical Analysis, for 1975-76 academic year only. Ph.D. or all requirements for Ph.D. completed. Rank: Ass't Prof. of Math. Duties include teaching three mathematics classes (9-10 credits) including a graduate class in numerical analysis. Salary commensurate with qualifications and experience. Send applications by August 1, 1975 to: Mr. Thomas L. Williams, Chairman, Dept. of Math, Box 8438, Idaho State University, Pocatello, Idaho 83209.

Idaho State University, Pocatello, Idaho. Visiting Instructor of Mathematics. One-year appointment for 1975-76 academic year. MA or MS required. Duties consist of teaching three lower division mathematic courses. Salary: \$9,500. Send applications by Aug. 1, 1975 to: Mr. Thomas L. Williams, Chairman, Dept. of Math., Box 8438, Idaho State University, Pocatello, Idaho 83209.

Western Illinois University, Macomb, Illinois seeks a mathematician to assume academic and research leadership beginning Sept. 1976. Applicants for this senior position should have a distinguished record of scholarship and teaching at university level and preferably demonstrated administrative ability. The department offers B.S. and M.S. degree programs and is responsible for a number of service courses for the entire university. Inquiries accompanied by resume should be sent to: Dr. Vidya S. Taneja, Chairperson's Search Committee, Dept. of Math, Western Illinois University, Macomb, Illinois 61455.

GTE Sylvania, Electronic Systems Group. GTE has many positions open. Some require a B.S. degree in mathematics or computer science, some require an M.S. in those fields, and many (but not all) require experience in assembly language programming or strong interest in telecommunications. They solicit "all minority group and female resumes which indicate training and/or experience that could reasonably be applied within the Electronic Systems Group", even though they may not have current listing openings. Contact: Michael J. Salach II, Employment/Compensation Supervisor, Electronic Systems Group, Communication Systems Division, GTE Sylvania, 189 "B" Street, Needham, Massachusetts 02194.

The Upjohn Company, Kalamazoo, Biostatistician I or II in Pharmaceutical R & D Division. Responsible for the statistical design and analysis of chronic toxicology studies; for conducting independent research, developing new statistical techniques for the evaluation of long-term animal studies. Qualifications for Level I: Ph.D. in biostatistics or statistics and 1-2 year's experience in the design and analysis of animal studies; or Master's Degree in same disciplines and 5-6 year's related experience. Level II: As above with Ph.D. plus 2 or more year's related experience. Send Curriculum Vitae to: J.R. Shultz, Manager, Biostatistics, The Upjohn Company, Kalamazoo, Michigan 49001.

University of Michigan-Flint, Assistant Professor of Mathematics. One year appointment. Applicants should have Ph.D., with evidence of excellence in teaching and continuing research ability. Write to: Dr. William Caldwell, Chairman, Dept. of Math, The University of Michigan-Flint. Flint, Michigan 48903

The Minnesota State College System, St. Paul. Vice Chancellor, Administrative Affairs.

The Minnesota State College System operates under a ten-member board and is comprised of seven comprehensive, multi-purpose institutions including 32,000 students; 2,100 academic personnel; and 1,350 support staff. The Vice Chancellor for Administrative Affairs is responsible for providing a broad support system of facility management and administrative services to the Board, the Chancellor, and the colleges. Desirable qualifications: analytical problem solving, interpersonal skills; knowledge of and demonstrated ability in budgeting, state governmental processes, and general management functions. Salary \$26,755-\$32,000 upon entry; maximum potential \$37,455. Deadline for applications, September 1, 1975; appointment date, October 1, 1975. Contact: Thomas Kelly, Vice Chancellor for Educational Relations, 407 Capitol Square Building, 550 Cedar Street, St. Paul, Minnesota 55101. Phone:(612)296-2167.

Washington University-St. Louis, position of Associate Vice Chancellor for Research. Ph.D. preferred, experience as faculty member and research investigator, knowledge of grant and contract administration; knowledge of federal agencies' programs, policies, and regulations; management, interpersonal, leadership, communication, and analytical skill; service orientation. Responsibilities include administration of large volume of sponsored projects (\$45 million in 1974); research and sponsored program policy making, development of external support and relationships, administration of sponsored programs. Submit resume and letters of application by September 12, 1975 to: Dr. Estelle Brodman, Chairman, Search Committee for Associate Vice Chancellor for Research, Medical School Library, Washington University School of Medicine, 660 South Euclid Avenue, Saint Louis, Missouri 63110.

Ramapo College, Dean or Associate Dean for Academic Affairs. Minimal five year administrative and teaching experience, and Ph.D. required. Salary (\$21,032 (Assoc.) - \$23,188 (Dean)). Ramapo is a new 4-year liberal arts college which has "deliberately attempted to create an innovative educational environment." Send resumes immediately to: Affirmative Action Office, Ramapo College of New Jersey, PO Box 542, Mahwah, New Jersey 07430.

New Mexico State University. Statistician. Responsibilities: approximately 30% teaching and 70% consulting. Qualifications: Ph.D in statistics with strong interest in applied statistics; evidence of teaching competency, 3-5 years of statistical consulting in at least three different subject matter areas, and fluency in English. Rank open. Write or call: Morris D. Finkner, Head, Dept. of Experimental Statistics, New Mexico State University, PO Box 3130, Las Cruces, New Mexico 88003. Telephone: (505) 646-2936.

State University of New York at Binghamton. Assistant to the President for Affirmative Action. This Officer is responsible for the implementation of the institutional Affirmative Action policy and program for faculty, staff, and students. Desired qualifications include: knowledge of Equal Employment Opportunity/Affirmative Action policies and legislation, experience in higher educational institutions, ability to communicate effectively. Starting salary range will be from the upper-teens to mid twenties depending on experience and preparation. Starting date is September 1, 1975. Send vita and names of three references by Aug. 1, 1975 to: O. Clayton Johnson, Chairperson, Affirmative Action Task Force, AD-815, State University of New York, Binghamton, NY 13901. Applicants are also requested to submit a statement on their views of Affirmative Action principles and strategies.

Union College. Dean of the Faculty. In evaluating candidates, particular attention will be given to: an earned doctorate or its equivalent; significant teaching experience and demonstration of scholarly interest; evidence of academic and administrative leadership; familiarity with budgetary procedures and use of budget as an instrument of policy; awareness of contemporary trends in higher education; and, commitment to high academic standards. Send resume to: Professor Helen Testroet, Chairman, Search Committee, Humanities Bldg., Union College, Schenectady, New York 12308.

Goodyear Aerospace Corporation, Akron, Ohio. Immediate openings for Engineers. Digital Systems Architect, MS or Ph.D. in electrical engineering or computer science with 8 to 15 years' experience in developing digital computers; Digital Systems Logic Designer, BS or MS in electrical engineering or computer science with 2 to 10 years' experience in the logic design of digital computers/system; System Software Architect, MS or Ph.D. in computer science, mathematics or electrical engineering with 5 to 10 years' experience in the architectural design of system software for digital computer systems; Applications Programmer, BS or MS in computer science, mathematics or electrical engineering with 3 to 5 years' experience in real-time applications programming at the Assembly Language level; Digital System Analyst, BS, MS or Ph.D. in physics, mathematics, electrical engineering or computer science with 8 to 15 years' experience in the application of general and special purpose digital computers. Contact: William Forrer, Personnel Representative, Goodyear Aerospace Corporation, 1210 Massillon Road, Akron, Ohio 44315. Phone: (216) 794-3385.

East Texas State University. Assistant or Associate Professor - Computer Science. Ph.D. required. Duties will include teaching mainly graduate courses in Computer Science related to Information Structures, Teleprocessing, Operating Systems and Computer Languages. A business-oriented background and interest in research activities are particularly desirable. Applicants are requested to send: 1) a personal resume, including research interests; 2) a list of graduate college courses taken and grades received; 3) a list of courses taught; 4) name of three references, to: Dr. Alton R. Goddard, Head, Dept. of Computer Science, East Texas State University, Commerce, Texas 75428. Telephone: (214) 468-2952.

Marshall University, Huntington, West Virginia, Teacher for Mathematics Education. Applicants should have doctorate with graduate course work in math, or reasonable assurance of completion date; significant experience in public school teaching (college teaching desirable) and in program development. Responsibilities include teaching undergraduate courses in math education for elementary and secondary teacher education; supervise math laboratory; maintain communication among participating agencies; be active in program development and improvement; assist in departmental research activities. Salary commensurate with qualifications and experience. Send applications and credentials by July 25, 1975 to: Dr. Danny G. Fulks, Director, Elementary/Early Childhood Education, College of Education, Marshall University, Huntington, West Virginia 25701.

University of Toronto. Professor, Dept. of Mathematics. Position available July 1, 1976. Applicants must submit record of scholarly achievement. Duties consist of teaching graduate and undergraduate courses, direction of Ph.D. theses and otherwise maintaining a high standard of research in the department. Salary negotiable. Applications should be addressed to: The Chairman, Department of Mathematics, University of Toronto, Canada M5S 1A1.

The fee for each regular advertisement to appear in the Newsletter is \$5 per issue. With our low dues structure and the high cost of publication, this is the minimum fee we can charge in order to break even. On the other hand, if a college, university or organization cannot afford the fee, then we will publish the advertisement without charge.

SPEAKERS BUREAU

The AWM members listed below have joined AWM's Speakers Bureau. Some have listed topics on which they are available for speaking and the audiences for which the topics are appropriate. Others have not listed specific topics and audiences. In all cases, institutions, industries and organizations wishing to invite any of these speakers, should contact the individual speaker directly.

<u>Speaker</u>	<u>Topics</u>	<u>Audiences</u>
Prof. Francine Abeles Department of Mathematics Kean College of New Jersey Union, N.J. 07083	Lewis Carroll, Mathematician Development in Modern Geometry Affine Geometry Rational, irrational, algebraic, transcendental real numbers Linear models in statistics Elementary ideas in topology	High school or college students
Dr. Gail A. Carpenter Department of Mathematics MIT Cambridge, MA 02139	Talk on the use of differential equations in describing how nerve impulses are transmitted	Any level
Martha Griffin 186 Grand Street New York, N.Y. 10013	Talk on international curricula at the high school advanced placement level and methods of working with women students of varied backgrounds	High school
Prof. Violet B. Haas School of Engineering Purdue University West Lafayette, IN 47907	"On Rocket Ships and Soap Bubbles" Talk on optimal singular control or on numerical methods for the solution of optimal control problems	Undergraduates with one year of calculus Graduate seminar or colloquium

Prof. Patricia C. Kenschaft
Department of Mathematics
Montclair State College
Montclair, N.J. 07042

Famous Women in the History
of Mathematics
What is Calculus?
 m -Homogeneous C^* -algebras
over S^n
Economic Applications of
Elementary Calculus

General

High school
Undergraduate
math. majors
Background:
One semester
of calculus

Prof. Vera Pless
Department of Mathematics
University of Illinois at Chicago Circle
Chicago, IL 60680

Talks on Self-Dual Codes
Error Correcting Codes

Undergraduate
math. majors
colloquia

Karen Rappaport
Mathematics Department
Essex County College
Newark, N.J. 07102

Perturbation Methods for Linear
and Non Linear Equations

Undergraduate
majors in
applied mathe-
matics and
engineering.
Seminar for
graduate
students and
interested
faculty.

Survey history of women in
mathematics

High School
teachers con-
ventions; High
School; Seniors
or juniors in
two or four
year colleges.

Careers in mathematics in physical
sciences

High School
and community
college students

Mathematical puzzles and games

High School

Teaching materials in the
elementary schools

Elementary
Teachers,
Teacher's aides

Mathematics applied to the
sciences

High School

Dr. Marianne Smith
Mathematics Department
California State University
Hayward, CA 94542

Prof. Bhama Srinivasan
Department of Mathematics
Clark University
Worcester, MA 01610

Group theory

Undergraduate
mathematics majors
Colloquium

Prof. Dorothy Wolfe
Department of Mathematics
Widener College
Chester, PA 19013

"Elephants and Mathematics"
"A Minimum for a sum of distances
on the unit sphere"
Application of matroid theory to a
problem in distance geometry

High school
Undergraduate math.
club
Colloquium

Other names from the Speakers Bureau will appear in later Newsletters. If you would like to join the Speakers Bureau, please submit your name, topics, and audiences for which suitable to Alice T. Schafer, Dept. of Math., Wellesley College, Wellesley, MA 02181.

LETTER TO THE EDITORS

Just how much sexism is there in mathematics textbooks? This was the question I asked myself over a year ago. I do not as yet have a definitive answer, but just a brief look at some of the texts on the market now was sufficient to convince me (and probably anyone except the most fanatic male chauvinists) that sexism exists in both blatant and subtle forms. Readers of the AWM Newsletter are certainly aware of the kinds of examples that I found.

The intent of this letter is two fold. First, I am soliciting information from Newsletter readers regarding any studies on sexism in mathematics textbooks that they are aware of. I am particularly interested in college and secondary level studies and especially in references or publications that give current information with periodic updating. Second, I am listing a few references on sexism that have been helpful to me and may possibly be worthwhile to others.

I firmly believe that if the goals of mathematics educators and researchers include giving the best opportunities to young minds entering mathematics and if the mathematical community wants to encourage maximum intellectual and creative growth, then it is absolutely essential that students had best be provided with role models and textual materials which are nonsexist in nature. One step in that direction is an awareness (and I am certain that many are unaware or unconcerned) of sexist attitudes. Perhaps AWM might consider, if it hasn't already been thought of, the publication of a chauvinistic index for mathematics educators, a concept that has been tried by the Education Committee of NOW in Report on Sex Bias in the Public Schools, 3rd Ed., 1973. REFERENCES: 1. Jay, Winifred Tom. Sex Stereotyping in Selected Mathematics Textbooks for Grades Two, Four and Six. (Dissertation, University of Oregon, 1973.) DAI 34A: 3028; December 1973. 2. Milnar, Josephine. "Sex Stereotypes in Mathematics and Science Textbooks for Elementary and Junior High School," in Report on Sex Bias in the Public Schools, Rev. Ed. N.Y.: National Organization for Women, 1972. 3. Stacey, Judith; Bèreaud, Susan; and Daniels, Joan. (Eds.). And Jill Came Tumbling After: Sexism in American Education, N.Y.: Dell, 1974. (An excellent place to begin for anyone concerned about sexism in education. Of special interest is a chapter by Marsha Federbush "The Sex Problems of School Math Books") 4. U'ren, Marjorie. "The Image of Women in Textbooks," in Women in Sexist Society: Studies in Power and Powerlessness, edited by Vivian Gornick and Barbara K. Moran, pp. 218-225, N.Y.: Basic Books, 1971. 5. Weitzman, Lenore, et al. "Sex-Role Stereotypes in Grammar School Textbooks." 1973. (Available from Institute of Governmental Affairs, University of California, Davis. 95616). Sincerely, David A. Blauer, State University College at Buffalo

Sexist Mathematics Texts

AWM members Constance Elson (Ithaca College) and Carolyn MacDonald (University of Missouri-Kansas City) have submitted names of two more books to be added to AWM's list of sexist mathematics texts. They are: Stephen K. Campbell, Flaws and Fallacies in Statistical Thinking and Keedy-Bittinger, Algebra and Trigonometry: A Functions Approach.

Connie has written to the publishers (Prentice-Hall) of the Campbell book urging them to withdraw it from the market and reissue a non sexist edition. Carolyn has written to Keedy complaining about his and Bittinger's book. Keedy responded that he was not meaning to be sexist. We hope he will reread his book in a new light.

AWM urges its members not to use the above texts until they are revised with the sexist material deleted.

You have probably noticed that the Newsletter is now being sent by Bulk Mail. This means that the rate per ounce for mailing is 1.8¢ versus 10¢ for first class mailing. Unfortunately, the Post Office treats it as 1.8¢/oz. mail apparently. A member from California wrote that her copy of the May-June Newsletter mailed in Massachusetts on June 9 was delivered to her in California on June 25. We hope that this will not be the pattern of delivery in the future, but if your mail service is this slow, please let us know and we shall take the matter up with the Post Office.

We wish to thank those of you who contribute articles to the Newsletter. They make the Newsletter more interesting and reduce the workload on the Editors. If it is possible for you to submit articles ready to be used in the Newsletter without their having to be retyped, that would save both time and money on this end. The instructions for typing are:

Typing surface 8 x 10
 Title in CAPS to left margin
 Author's name either at beginning or end
 5 space paragraph indentation
 No space between paragraphs.

Unless you have already paid your dues from October 1, 1975 to October 1, 1976, they are payable by October 1, 1975.

The Executive Committee voted to have dues for all members payable at the same time in order to simplify bookkeeping. So even if you paid your dues, say, in December, 1974 or January 1975, we hope that you will be willing to pay them this year by October 1.

Please see the last page of the Newsletter for the dues structure.

Again, we want to thank all of you who have made contributions to AWM. They are deeply appreciated.

JR, ATS

ANNOUNCEMENTS

AWM Executive Committee

Congratulations to M. Susan Montgomery who has been elected as Representative from the West Coast, 1975-79! The Executive Committee for 1975-76 is now complete:

President - Lenore Blum, Mills College

Rep. from the Midwest - Evelyn Boorman, University of Michigan

Rep. from the South - H. Christine Stokes, U. of Mississippi

Rep. from the East - Mary Gray, American University

Rep. from the West - M. Susan Montgomery, Univ. of Southern California

Employment Registrar - Judy Green, Rutgers U., Camden

Co-Treasurer/Editor of Newsletter - Judith Roitman, Wellesley College

Past President (Co-Treasurer/Editor of Newsletter) - Alice T. Schafer, Wellesley College

AWM Summer Meeting in Kalamazoo (in conjunction with Summer Meetings of AMS and MAA)

Panel discussion and business meeting, Tuesday, August 19, 3:30-5.

Topic: Noether to Now--The Woman Mathematician

Panelists: Lenore Blum: Superstar Syndrome

Vivienne M. Mayes: Black and Female

M. Susan Montgomery: the transition between graduate school and a permanent job

Mary Ellen Rudin: Twenty five years a woman mathematician

Jane Cronin-Scanlon: Remarks on some irrelevant experience

Alice T. Schafer, Moderator

Open Executive Committee Meeting, Tuesday, August 19, 7:30 - 9 PM

FUTURE AWM MEETINGS

Cambridge, MA

October 25, 1975

San Antonio

January, 1975

ASSOCIATION FOR WOMEN IN MATHEMATICS
MEMBERSHIP APPLICATION

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Renewal _____

Name _____
Address _____

Individual _____
(\$5.00, Oct. 1, 1975-
Oct. 1, 1976)

Family _____
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Oct. 1, 1976)

Retired or Student _____
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Oct. 1, 1976)

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ASSOCIATION FOR WOMEN IN MATHEMATICS
Alice T. Schafer
Department of Mathematics
Wellesley College
Wellesley, MA 02181

AWM
Department of Mathematics
Wellesley College
Wellesley, MA 02181

July - August, 1975

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