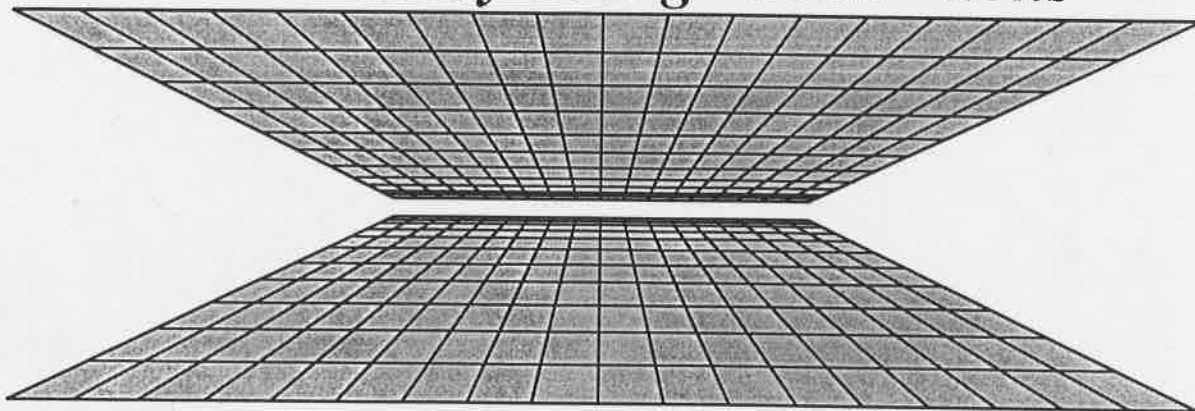


Washington State Community College Mathematics Conference

“C³ - Community College Connections”



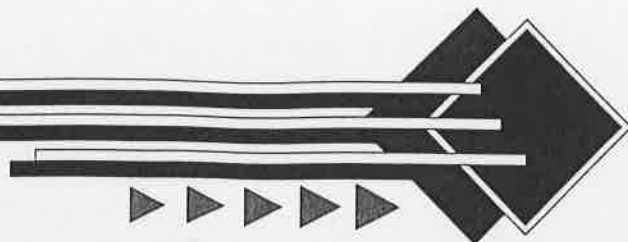
April 24th, 25th, 26th
1997

at Campbell's Conference Center
on beautiful Lake Chelan

Hosted by:



PROGRAM OVERVIEW

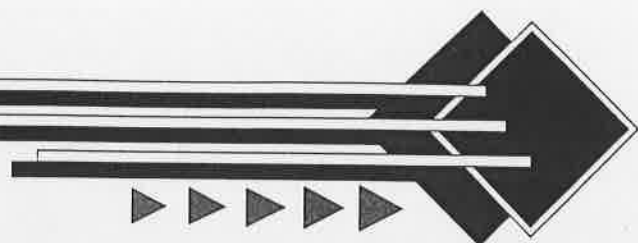


DATE	TIME	SPEAKER	ROOM	PRESIDER
THURSDAY	7:00 - 8:00 pm	Helen Burn Highline Community College <i>Panel Discussion: Graphing Calculators In Below College-Level Math Classes</i>	Ballroom 1	Larry Larson
	8:00-8:15 pm	BREAK		
	8:15-10:00 pm	SOCIAL	Suite 5434	
FRIDAY	7:00-8:15 am	BREAKFAST	Ballroom	
	8:15-8:30 am	BREAK		
SESSION 1	8:30 - 9:30 am	Sally Glover (8:30-9:00 am) Clark College <i>Course Info's Going On The Internet...Are You Weaby?</i>	River Room	Larry Larson
		Larry Larson (9:30-10:00 am) Green River Community College <i>Painting Apartment Buildings and A "Fibonomial Theorem"</i>	River Room	
		Brian Hogan Highline Community College <i>Can You Get There From Here: A "Checker-Jumping" Problem</i>	Park Room North	Don Alexander
		Rosemary Hirschfelder University of Puget Sound <i>Spreadsheet (and other) Projects in Precalculus</i>	Park Room South	David Bender
	9:30-9:45 am	COFFEE BREAK		
SESSION 2	9:45-10:45 am	Kevin Tye Columbia Lighting Spokane, WA <i>Applications of Precalculus Mathematics in Illuminating Engineering</i>	River Room	Laura Moore-Mueller
		David Goering Eastern Washington University <i>The Equicenter: A New Center Point In Every Triangle</i>	Park Room North	Diane Butcher-Evans
		Kent Brauninger Peninsula Community College <i>Lucky Larry Jorge</i>	Park Room South	Rochelle Mitchell
		Kayana Schaps Hoagland South Puget Sound Community College. <i>Using ALGEBRA TILES To Present Elementary Algebra</i>	Ballroom 1	Joanne Martin
		Susan Norris Peninsula Community College <i>Applied Math - Engine, Pullman or Caboose</i>	Ballroom 2	David Bender
	10:45-11:00 am	COFFEE BREAK		

DATE	TIME	SPEAKER	ROOM	PRESIDER
SESSION 3	11:00am-12:00pm	Yves Nievergelt Eastern Washington University <i>(Pre)Calculus Problems From Industry</i>	River Room	Diane Butcher-Evans
		Helen Burn Highline Community College <i>Axiom of Choice: Do You Use It? Do You Abuse It? Do You Even Understand What It Is?</i>	Park Room North	Keith Alford
		Matt Munro Highline Community College <i>An Introduction to $P ? NP$</i>	Park Room South	Donnie Hallstone
LUNCH <i>Keynote Speaker</i>	12:00-2:00 pm	Tom Furness University of Washington <i>Learning Virtually</i>	Ballroom	Christie Gilliland
	2:00-2:15 pm	BREAK		
SESSION 4	2:15-3:15 pm	John Reay Western Washington University <i>A Surprising But Easily Proved Geometric Decomposition Theorem</i>	River Room	Larry Larson
		James Duemmel Western Washington University <i>Complex Eigenvalues: Are Your Students Going In Circles?</i>	Park Room North	Rochelle Mitchell
		James Harper Central Washington University <i>Pythagorean Quadruples: Vectors in R^3 With Integer Coordinates and Integer Norm</i>	Park Room South	Heidi Lyman
	3:15-3:30 pm	REFRESHMENT BREAK		
SESSION 5	3:30-4:30 pm	Ron Guenther Oregon State University <i>The Use of History in the Teaching of Mathematics</i>	River Room	Laura Moore-Mueller
		Tom Phelps Pierce College <i>How To Incorporate LINDO Computer Output Into Your Teaching Of Linear Programming</i>	Park Room North	David Bender
		Don Pierce Western Oregon University <i>Combining Technology and Cooperative Learning</i>	Park Room South	Joanne Martin
		Heidi Lyman Green River Community College <i>Circles and Mohr's Circle</i>	Ballroom 1	Heidi Lyman
		Larry Runyan Shoreline Community College <i>Creating a Web Site for a College Level Course on the Internet</i>	Ballroom 2	Diane Butcher-Evans
	4:30-5:00 pm	WAMATYC MEETING	River Room	
5:00-5:30 pm	BREAK			
	5:30 pm	NO HOST BAR	Ballroom	
DINNER <i>Keynote Speaker</i>	6:00-7:30 pm	Deborah Hughes-Hallett Harvard University <i>Changing Curriculum: Reflections and Prediction</i>	Ballroom	Donnie Hallstone
CRUISE	8:15-10:30 pm	<i>The Lady of the Lake</i>		

DATE	TIME	SPEAKER	ROOM	PRESIDER
SATURDAY	7:30-9:00 am	BREAKFAST		
SESSION 1	9:15-10:15 am	David Jabon Eastern Washington University	River Room	Joyce Hammer
		Gail Nord Gonzaga University <i>The Mathematics of the Global Positioning System</i>		
		Kory McElravy, Star McQuiston, Susan Santucci Central Washington University <i>Approximating Angles with Pythagorean Triangles</i>	Park Room North	Rochelle Mitchell
	Diana Bender, Allan Walton Highline Community College <i>Faculty Intern Program at Highline Community College</i>	Park Room South	Donnie Hallstone	
	10:15-10:30 am	COFFEE BREAK		
SESSION 2	10:30-11:30 am	Robin McLeod Saltire Software, Inc. Tigard, OR <i>The Power of Thought</i>	River Room	Larry Larson
		Amy Stewart Western Washington University <i>The Use of the CBL and the Graphing Calculator in Class and the Underlying Mathematical Concepts</i>	Park Room North	Keith Alford
		Cen-Tsong Lin Central Washington University <i>Using Minitab Macros in Elementary Statistics</i>	Park Room South	Heidi Lyman
		Kevin Boblet, Steve Mull (10:30-11:00 am) Central Washington University <i>Measuring Some Polynomials</i>	Ballroom 1	Joyce Hammer
LUNCH	12:00-1:00 pm	CONCLUSION	Ballroom	

PROGRAM HIGHLIGHTS



THURSDAY, April 24th

Helen Burn

7:00-8:00 pm

Ballroom 1

Highline Community College

Panel Discussion: Graphing Calculators In Below College-Level Math Classes

The panel will focus on the use of graphing calculators in below college-level courses, looking at both the advantages and potential pitfalls which can occur. Bring your ideas and input for what will likely be a lively discussion.

Break

8:00-8:15 pm

Social

8:15-10:30 pm

Suite 5434

FRIDAY, April 25th

Breakfast

7:00-8:15 am

Ballroom

Break

8:15-8:30 am

Session 1

8:30-9:30 am

Sally Glover

(8:30-9:00 am)

River Room

Clark College

Course Info's Going On The Internet ... Are you Weaby?

This year I put my course information (syllabus, assignments, calendar) on the world wide web. This talk will introduce you to the tools necessary (HTML editors, FTP utilities, etc.) to start your own course website.

Larry Larson

(9:00-9:30 am)

Green River Community College

Painting Apartment Buildings and A "Fibonomial Theorem"

A problem by R. K. Guy asks in how many ways can an n-story apartment be painted two different colors if one of the colors cannot be used for adjacent floors but the other can. One solution results in the Fibonacci triangle, analogous to Pascal's triangle, and a Fibonomial theorem, analogous to the Binomial theorem.

Brian Hogan
Highline Community College

Park Room North

Can You Get There From Here: A "Checker-Jumping" Problem

An elegant solution to a problem of advancing "checkers" on lattice points in the plane. This is adapted from Ross Honsberger's [Mathematical Gems II](#). I usually present this to my Math 126 class after they've studied infinite series.

Rosemary Hirschfelder
University of Puget Sound

Park Room South

Spreadsheet (and other) Projects in Precalculus

Many students who take the College Algebra and Trigonometry (or Precalculus) class do not continue on to other mathematics courses. A course that exposes these students to the workings of a spreadsheet program may have lasting benefits that a more traditional course would not. This presentation will examine projects for Algebra and Trigonometry, especially those that can be done with spreadsheets. The variety of areas to which spreadsheet programs can be applied at the precalculus level will be demonstrated. In addition, examples will illustrate principles of good spreadsheet design.

Coffee Break

9:30-9:45 am

Session 2

9:45-10:45 am

Kevin R. Tye
Columbia Lighting
Spokane, Washington

River Room

Applications of Precalculus Mathematics in Illuminating Engineering

This session discusses common uses of algebra, geometry, and trigonometry in illuminating engineering. The intent is to provide mathematics instructors with sample problems and materials that are appropriate for precalculus students.

David Goering
Eastern Washington University

Park Room North

The Equicenter: A New Center Point In Every Triangle

Like the orthocenter and incenter, the equicenter is a point in the interior of every triangle. I am apparently the first person to find a way to locate this point and prove that it exists in every triangle. The equicenter is the point P in triangle ABC with the following property: If point D is the intersection of line AP with line BC , point E is the intersection of BP with AC , and point F is the intersection of CP with AB , then point P is that point which makes triangle DEF equilateral. The question of whether such a point P exists was given as Problem 10358 in the January 1994 issue of the Math Monthly. Apparently, mine was the only complete solution received, and it will be published later this year. In this talk I will show how to find this point in any triangle and will use Geometer's SketchPad and Mathematica to illustrate my solution to this problem. The solution makes use only of trigonometry and first-quarter calculus, but the computer is essential.

Kent Brauning
Peninsula Community College

Park Room South

Lucky ~~Larry~~ Jorge

Jorge, an excellent student, got the right answer to a volume integral question while using an incorrect approach. That raised the question in my mind, "Under what conditions would his incorrect approach yield the right answer?". Answering this question forced me into a fantastic intermediate algebra review, so that this problem could serve as a bonus credit problem, or an algebra review problem, or just an interesting reminder to check the support work for the answer as well as the answer itself.

Kayana Schaps Hoagland
South Puget Sound Community College

Ballroom 1

*Using ALGEBRA TILES To Present Elementary Algebra
(A Hands-on Approach for Remedial Students)*

ALGEBRA TILES (also known as flip-chips) can be used to provide a visual model and hands-on approach for students to see elementary algebra concepts. The ideas of combining similar terms, adding and subtracting polynomials, multiplying binomials, factoring, solving quadratic equations, and completing the square will be modeled. All participants will receive handouts, hands-on experience using the manipulatives, and information about how to order students sets as well as overhead sets for class demonstration purposes.

Susan Norris
Peninsula Community College

Ballroom 2

Applied Math - Engine, Pullman or Caboose

Applied mathematics: is it best used as an engine to motivate mathematical concepts, as a pullman to transport students to their goals, or as a caboose to watch for trouble from behind? Applied mathematics can be viewed as a modification of discovery learning. This session will take an early look at this reversal of the traditional order of operations of mathematics education.

Coffee Break

10:45-11:00 am

Session 3

11:00-12:00 am

Yves Nievergelt
Eastern Washington University

River Room

(Pre)Calculus Problems From Industry

Participants in the preconference NSF workshop will present material that they designed in the workshop to convey to students some of the features of problems from industry at the level of precalculus and calculus.

Helen Burn
Highline Community College

Park Room North

Axiom of Choice: Do You Use It? Do You Abuse It? Do You Even Understand What It Is?

The Axiom of Choice (AC) is one of the most discussed axioms of mathematics, perhaps second only to Euclid's Parallel Postulate. It goes something like this: If you have infinity pair of socks (stored, obviously, in a chest of drawers designed by a mathematician) and your task is to make a new collection of socks by choosing one sock from each pair, how would you do it? It's no problem if it's pairs of shoes, but socks are somehow problematic. Mathematicians found that they needed to do the same thing with numbers rather than socks, and they called it the Axiom of Choice.

Matt Munro
Highline Community College

Park Room South

An Introduction to $P \stackrel{?}{=} NP$

Listed by "Nova" as one of the ten most important unsolved problems in mathematics, the P-NP question deals with the intractability (we think) of some well-known problems such as traveling salesman, knapsack, and graph coloring. The talk will assume no specific knowledge on the part of the audience, and will contain at least one joke.

Lunch

12:00-2:00 pm

Ballroom

Keynote Speaker:

Tom Furness
University of Washington

Learning Virtually

Humans have a remarkable ability to process both spatial and symbolic information. But processing symbolic information is limited to the completeness of the cognitive models that we build through our experiences. These models represent our knowledge and allow us to assign meaning to these symbols. This process is especially true with language and the way we learn from reading. However, disciplines such as mathematics may not be easily taught using symbols. In this regard it may be better to provide a spatial experience such as a field trip rather than look at words, diagrams and even photographs in a textbook.

Virtual interfaces allow us to exploit the power of computer graphics to journey into the textbook, creating a computer-synthesized world wherein students take a field trip of spatial experience and even learn by doing. The textbook now becomes a "place" which can be experienced and "inhabited". For example, a student in trigonometry enters the Pythagorean Theorem Kingdom to learn an important mathematical principle by using virtual world objects to cross a moat and scale the wall of a virtual castle. A student in elementary school "becomes" a tree and interacts with friends who are birds, earthworms and rays of light to understand the ecology of a virtual forest. A physics student visits a virtual planet where she can manipulate gravity, change the speed of sound, light, and Planck's constant or become an atom and interact with friends to form molecules and compounds. Virtual interfaces provide a new high bandwidth link to the human mind which accelerates learning, enhances creative abilities, extends communications and allows students to perceive and rapidly process complex information. Ultimately, virtual interface technology makes computers more human-like rather than humans more computer-like.

Many of these ideas are being explored and developed in the Human Interface Technology Laboratory. Dr. Furness will report on these efforts along with new developments in hardware and software technologies which make virtual interfaces practical and affordable for educational applications.

Break

2:00-2:15 pm

Session 4

2:15-3:15 pm

John Reay

Western Washington University

River Room

A Surprising but Easily Proved Geometric Decomposition Theorem

Two sets don't have to look alike just because each can be partitioned into two subsets and the corresponding subsets look alike. I'll review several decomposition theorems (e.g., the Banach-Tarski paradox), show some neat new ones, and ask some easily stated open problems about decompositions.

James Duemmel

Western Washington University

Park Room North

Complex Eigenvalues: Are Your Students Going In Circles?

Every rotation matrix has complex eigenvalues. However, a real matrix with nonreal eigenvalues is not necessarily a rotation matrix (or a constant times a rotation matrix). Is there a rotation lurking in the background for such matrices?

James D. Harper

Central Washington University

Park Room South

Pythagorean Quadruples: Vectors in R^3 With Integer Coordinates and Integer Norm

The vector (2,2,1) has a nice norm (length), namely 3, i.e., $2^2 + 2^2 + 1^2 = 3^2$. Some other integer friendly vectors include: (8,12,9) (2,6,9) and (44,48,33) with respective norms 17, 11 and 73. As you have probably guessed, a Pythagorean Quadruple is a 4-tuple of positive integers, (a,b,c,d), such that $a^2 + b^2 + c^2 = d^2$. These 4-tuples can be viewed as integer friendly vectors (a,b,c) in 3-space. I will derive a formula that will provide us with all such 4-tuples. There will also be a few comments on the history of this problem.

Refreshment Break

3:15-3:30 pm

Ron Guenther

Oregon State University

River Room*The Use Of History in the Teaching of Mathematics*

Collegiate mathematics is characterized by the emphasis on concepts and ideas as well as on techniques in solving specific problems. On the other hand, students very often see mathematics as a static discipline and prefer a cookbook approach to problem solving which stresses the process rather than an understanding of the process. The main disadvantages to that approach are the inability to solve problems other than those specifically treated and the inability to find new methods for solving new problems. By bringing out the history of an idea, the student is shown the context in which a new mathematical method arose. The student learns how this idea fits into the general development of civilization and how that stands above all cultures. It puts a human face on mathematics and shows mathematics as a growing and developing discipline. It also gives the proper generality of the methods. It is important that the history given be the truth. What usually passes for scientific and mathematical history is a disgrace. In this talk, I plan to elaborate on these remarks and to give some concrete examples about how to incorporate history in classes. I am not proposing a course in the history of mathematics, but rather am proposing a concerted effort to bring real history into the development of the mathematical topics being presented.

Tom Phelps

Pierce College

Park Room North*How To Incorporate LINDO Computer Output Into Your Teaching Of Linear Programming*

(This is NOT how to use the LINDO software; I provide plenty of examples complete with LINDO output for you to take back.)

I will show you my approach to teaching Linear Programming; how I set up a two variable model algebraically, how that is solved graphically, and how I draw parallels from the algebra and graphical models to the LINDO computer output. I will also discuss the terms specific to LP models. I will then walk through several other multi-variate models to include blending, transportation, network flow, scheduling, and inventory control models. For all of these models, I provide the scenarios and all of the LINDO output for you to use in your classroom. I also have another set of problems for you to take and use (includes advertising and portfolio selection problems).

Don Pierce

Western Oregon University

Park Room South*Combining Technology and Cooperative Learning*

Faculty at Western Oregon University have developed an activity-based quantitative literacy course where students work in teams to quantify real-world issues using a spreadsheet and word processor. The course has been tremendously successful and was an award winner in the NSF sponsored First Annual Awards for Innovative Mathematics Service courses using technology. The presentation will acquaint faculty with an overview of the project and an understanding of why the changed learning environment leads to increased student success.

SATURDAY, April 26th

Breakfast

7:30 -9:00 am

Ballroom

Session 1

9:15-10:15 am

David Jabon

Eastern Washington University

River Room

Gail Nord

Gonzaga University

The Mathematics of the Global Positioning System

We will explain the mathematics underlying the global positioning system, a system of 24 satellites which allows one to determine one's position on the earth with great accuracy. We will also describe activities which can be used in the college algebra classroom to have students simulate GPS units using hand calculators or computers.

Kory McElravy, Star McQuiston, Susan Santucci

Central Washington University

Park Room North

Approximating Angles with Pythagorean Triangles

The right triangle with legs $a=120$, $b=119$ and hypotenuse $c=169$ offers a good approximation for a 45° - 45° - 90° triangle (the larger angle is about 45.24°). Can you find a Pythagorean Triangle that provides a better approximation? In general, can you find a Pythagorean Triangle that provides a good approximation for 30° , 32° , 62° ? We will present a method that will allow us to approximate any acute angle, as close as we wish, with a Pythagorean Triangle. The method requires a little trig, continued fractions and, of course, the well known formula for generating Pythagorean triples.

Diana Bender, Allan Walton

Highline Community College

Park Room South

Faculty Intern Program at Highline Community College

Highline began a new program this past fall by offering two one-year faculty intern positions. The purpose of the intern position is to give soon-to-be graduates or recent graduates practical teaching experience at several different levels, the opportunity to do many observations of experienced mathematics faculty in the classroom, participate in departmental and college activities, and the opportunity to learn about many other campus resources. After a year in these positions the interns will have an excellent idea as to the complete range of the campus-wide duties and responsibilities of a full-time community college mathematics instructor. Come hear about the advantages and disadvantages of the program, how to start such a program, and how to apply for next year's intern positions.

Coffee Break

10:15-10:30 am

Robin McLeod
Saltire Software, Inc.

River Room

The Power of Thought

Some insights and observations on a liberal arts course for the mature student. The course is titled "The Power of Thought" (clear thought and communication through an appreciation of mathematical thought processes).

Amy Stewart
Western Washington University

Park Room North

*The Use of the CBL and the Graphing Calculator in Class and
the Underlying Mathematical Concepts*

I will demonstrate a "Precalculus II type" experiment where I'll collect data using the CBL. Then, I will introduce various methods in finding a reasonable model for the data with the aid of a graphing calculator. Meanwhile, I will summarize the concepts that the students are expected to know and those concepts that are reinforced and introduced during the course of the experiment.

Cen-Tsong Lin
Central Washington University

Park Room South

Using Minitab Macros in Elementary Statistics Classes

Minitab is a computer statistical package used in universities and colleges worldwide for teaching and research purposes. My talk will briefly introduce Minitab features and Minitab macros. I will also demonstrate some Minitab macros that can help students visualize and understand the concepts of the Law of Large Numbers, Central Limit Theorem and confidence intervals.

Kevin Boblet, Steve Mull
Central Washington University

(10:30-11:00 am)

Ballroom 1

Measuring Some Polynomials

We have been working on a general formula for all integer solutions to the equation:

$$x^4 + y^4 + z^4 = a^4,$$

In the process, we came across some interesting inequalities such as:

$$(x + y + z)^4 > 16(x^2 y^2 + x^2 z^2 + y^2 z^2), \quad x, y, z > 0.$$

We've discovered, as a result of this investigation, some solutions and proofs that will be presented.

Lunch

12:00 - 1:00 pm

Ballroom

Conclusion

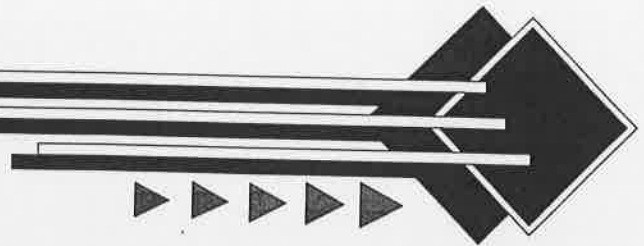
HISTORY OF THE CONFERENCE



The first Washington State Community College conference/retreat was held in 1969 at "The Lodge" in Ashford, near Mount Rainier. The organizers were Phil Heft, Jim Relf, Larry Larson and John Van Druff. Thirty-three persons attended, including such notables as Professors Kingston and Hashisaki, at a cost of \$16.68 per person.

<i>Year</i>	<i>Conference Host Schools</i>	<i>Location of Conference</i>
1969	Green River/Highline/Ft. Steilacoom Colleges	The Lodge
1970	Spokane Falls Community College	The Lodge
1971	Everett Community College	Snoqualmie Pass
1972	Everett Community College	Snoqualmie Pass
1973	Seattle Central Community College	Snoqualmie Pass
1974	Green River Community College	Lake Wilderness
1975	Highline Community College	Providence Heights
1976	Bellevue Community College	Snoqualmie Pass
1977	Shoreline Community College	Providence Heights
1978	Edmonds Community College	Providence Heights
1979	Olympic College	Port Ludlow
1980	Spokane Falls Community College	Sun Mountain
1981	Spokane Falls Community College	Sun Mountain
1982	Highline Community College	Lake Chelan
1983	Olympic College	Port Ludlow
1984	Green River Community College	Alderbrook
1985	Shoreline Community College	Sun Mountain
1986	North Seattle Community College	Alderbrook
1987	Lower Columbia Community College	Alderbrook
1988	Olympic College	Port Ludlow
1989	Bellevue Community College	Lake Chelan
1990	Clark College	Alderbrook
1991	Pierce College and Tacoma Community College	Lake Chelan
1992	Yakima Community College	Yakima
1993	Highline Community College	Wenatchee
1994	South Seattle Community College	Silverdale
1995	Skagit Valley and Whatcom Community Colleges	Wenatchee
1996	Spokane Falls Community College and ORMATYC	Skamania Lodge
1997	Green River Community College	Campbell's Resort in Chelan
1998	Tacoma and Big Bend Community Colleges	Campbell's Resort in Chelan
1999		
2000		

WAMATYC



The Washington affiliate of AMATYC (WAMATYC) was organized in 1985-86. WAMATYC invites all participants to join and support this organization. WAMATYC supports the AMATYC Student Mathematics League, the annual spring conference, publishes the faculty/textbook directory, and members represent Washington at the AMATYC conventions. Dues are \$5.00 per year. For more information, attend the annual meeting, Friday 4:30 - 5:00 p.m. in the River Room.

President:

Paul Casillas, Clark College 1994-97

Former Presidents:

1992-94	Mike Greenwood, Clark College
1990-92	Phil Heft, Green River Community College
1988-90	Chuck Ainley, Spokane Falls Community College
1986-88	Barbara Poole, North Seattle Community College

WAMATYC MEMBERSHIP APPLICATION

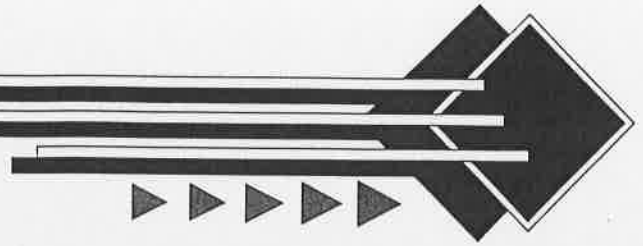
Name: _____ (please print)

College: _____

E-mail: _____

Please make checks payable to WAMATYC (\$5.00)

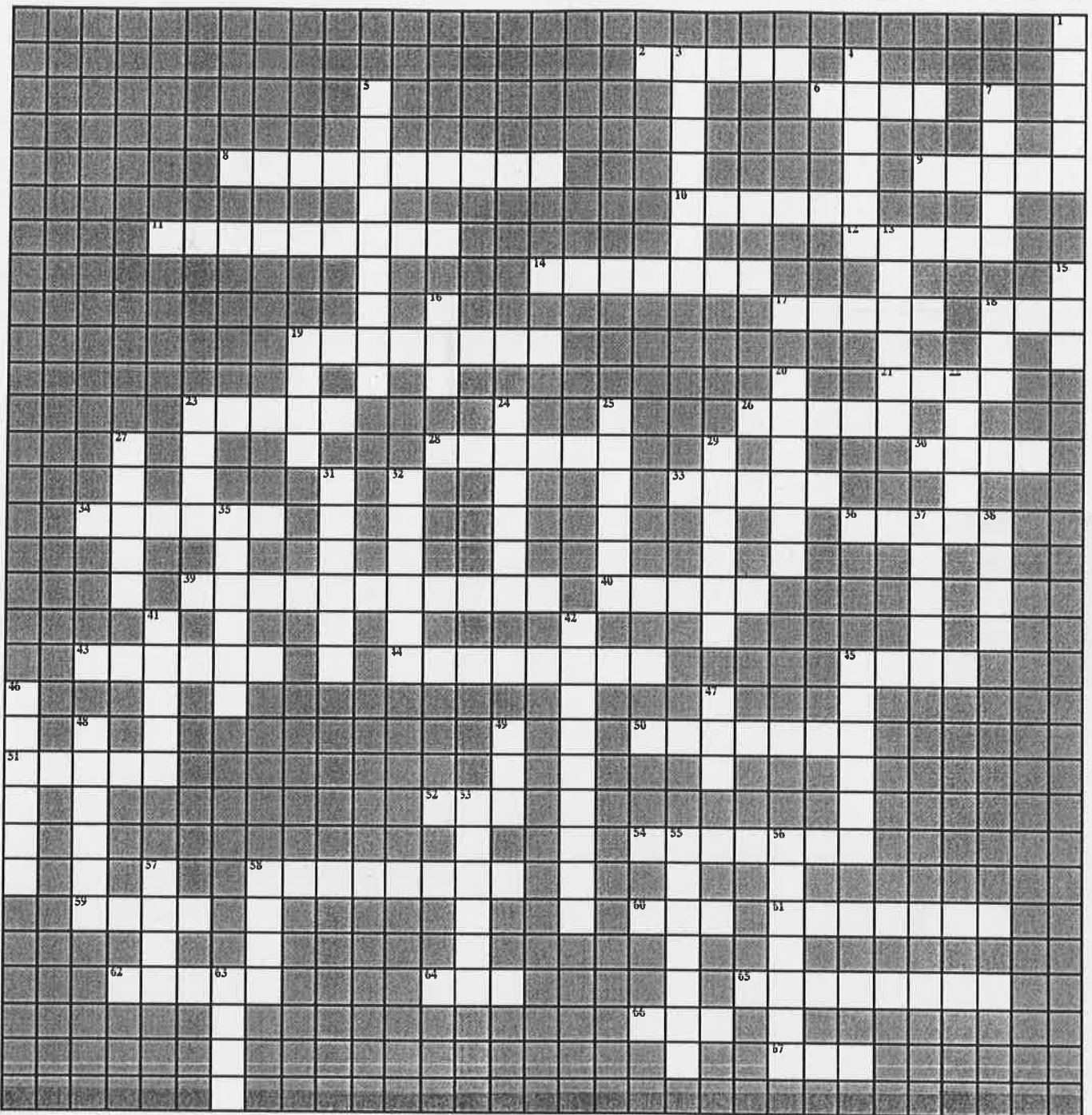
CROSSWORD PUZZLE



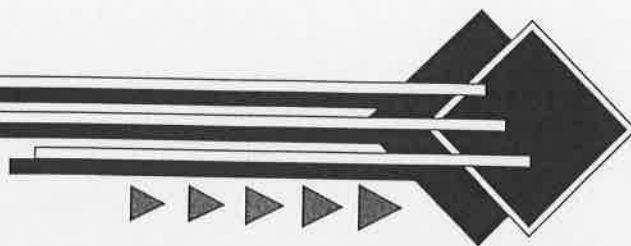
Win a door prize and learn more about your conference colleagues!

The person sitting next to you may be the answer to a question! You don't have to get them all. We will accept your best attempt. Winners will be randomly selected from entries which are turned into the box at the Registration table. **DEADLINE: 5:30 p.m. Friday Evening!** Write your NAME and SCHOOL below.

YOUR NAME _____ SCHOOL: _____



CROSSWORD CLUES



ACROSS

- 2 When you're here, Emily of Peninsula CC will help you out.
- 6 BCC faculty member was one of the "founders" of this conference.
- 8 Previous name of Pierce College (Fort ____).
- 9 Two buildings on WVC campus named after Columbia dam man.
- 10 College with 2 main campuses and ≥ 10 sites.
- 11 GRCC President.
- 12 Largest two-year private college in U.S.
- 14 CC with the orca as its school symbol.
- 17 WVC faculty who snowshoed through 3 feet of snow when he couldn't bicycle.
- 18 First name of keynote who may not "really" even be here.
- 19 Location of WWU math depart. (2 words)
- 21 Type of track 1st constructed at current site of Clover Park.
- 23 Only administrator in 17 year history of IEL-Colville branch of CCS.
- 26 A speaker's first name and a bird.
- 28 SU building has drawn attention of architects around the world
- 30 TCC faculty member has child in WWU Math Master's Program.
- 33 Schaps Hoagland of SPSCC will lay these out.
- 34 College has view of Mt Rainier and Olympics from the same place on campus.
- 36 NCSS's only native Seattle-ite (first name).
- 39 Owsley of WWCC wears them to work (2 words).
- 40 According Downie of PCC, football team named for famous mathematician.
- 43 Olympic is celebrating this anniversary.
- 44 A speaker and an herb.
- 45 NIC is located on a _____.
- 50 TCC has a grand view of this mountain.
- 51 1995-96 WA State Math League Champs.
- 52 "School that delivers".
- 54 SU faculty member and Harvard Precalculus author.
- 58 Sailed down Lake Chelan under smoky skies of 1994 forest fire.
- 59 One of a trio speaking on triangles (first name).
- 60 PCC speaker who is on the right track (first name).
- 61 First CC to offer ATA degree in Visual Basic.
- 62 Shoreline faculty member sings for Seattle Opera Company.
- 64 Runyan of SCC will create such a site!
- 65 Skagit Valley mascot is a species not native to WA state.
- 66 First name of OSU speaker who didn't know where the conference was until last week!
- 67 First name of PCC speaker who likes LINDO.



CROSSWORD CLUES

DOWN

- 1 Brauning of Peninsula CC is a graduate of this Boston U.
- 3 College is located approx. 21 nm 175° from Victoria, BC.
- 4 Chairs two of the largest math departments in WA.
- 5 GRCC math faculty member has strong aversion to mayonnaise.
- 7 Boblet and Mull will measure them (abbre/prefix).
- 13 A new "program" at HCC.
- 15 Math building at GRCC
- 16 Keynoter's initials.
- 18 Speaker from Columbia Lighting.
- 19 HCC speaker who will be "first" at the conference.
- 20 Poles on the HCC campus.
- 22 Mascot is the Penguin
- 23 Lyman of GRCC hangs out in this circle.
- 24 Peninsula College faculty has this intramural ball sport.
- 25 Longest hair in the HCC math department.
- 27 First name of HCC speaker who will be jumping around.
- 29 Original location of Clark College (___ House).
- 31 GRCC math instructor fascinated with the theory of relativity.
- 32 Astronaut who spoke at the conference the year that Clark College hosted it.
- 35 Mascot for GHC (Charlie ___).
- 37 Consistently places near top of AMATYC contest in WA and nation.
- 38 Speaker whose first name begins with last letter of the alphabet (almost).
- 41 TCC faculty member vacations in Chelan and has same name as a community college.
- 42 WWU math chair at the 1st conference.
- 45 Junior high student of retired member of the GRCC math department.
- 46 Campus most likely to get wet on a rainy day.
- 47 First name of CWU speaker "into" quadruples.
- 48 Lin of CWU will show you these.
- 49 Jabon and Nord of Eastern will speak on the math of this.
- 53 College was formerly FSCC.
- 55 Lake on the Pierce campus.
- 56 Conference speaker raised in Brazil.
- 57 The college on the _____ is known as NIC.
- 58 We will cruise upon her (*The* _____).
- 63 Math Center director at SFCC.

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THANK YOU

The Conference Planning Committee would like to thank the following people. Without their help we first and foremost would probably never have survived. Most certainly, we would not have been able to provide you with what we hope is a very positive conference experience.

The **Green River Community College Foundation** for providing you with pens, pencils, and notebooks.

Barb Sutherland and **Jean Carlson** from Green River Community College for their wonderful secretarial services and endless patience.

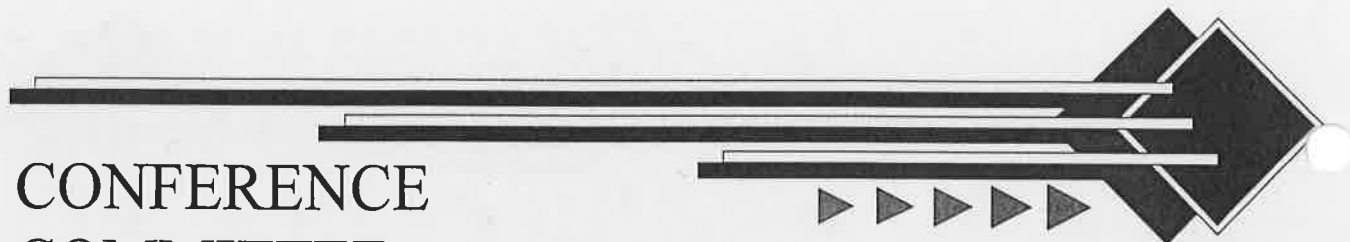
Tom Furness and **Deborah Hughes-Hallett** for being our keynote speakers.

The following people for being speakers: **Helen Burn, Sally Glover, Larry Larson, Brian Hogan, Rosemary Hirschfelder, Kevin Tye, David Goering, Susan Norris, Kent Brauning, Kayana Schaps Hoagland, Yves Nievergelt, the NSF Workshop Participants, Matt Munro, John Reay, James Duemmel, James Harper, Ron Guenther, Tom Phelps, Heidi Lyman, Larry Runyan, Don Pierce, David Jabon, Gail Nord, Kory McElravy, Susan Santucci, Star McQuiston, Diana Bender, Allan Walton, Amy Stewart, C.T. Lin, Kevin Boblet, Steve Mull, and Robin McLeod.**

All of the vendors for providing exhibits and hosting the cruise, **ITP** for hosting the social aboard *The Lady of the Lake*, **Prentice Hall** for hosting the Thursday evening social and providing us with dry-erase markers, **Addison-Wesley** for providing us with bags, **Wiley** for providing us with books for door prizes and for helping with Deborah Hughes-Hallett's expenses, **Texas Instruments** for providing a TI-85 graphing calculator for a door prize, and **Hewlett-Packard** for providing an HP48GX graphing calculator for a door prize.

Campbell's Conference Center for all of their help in putting on the conference. In particular, **Judy Chambers** and **Marie Collins** for their assistance.

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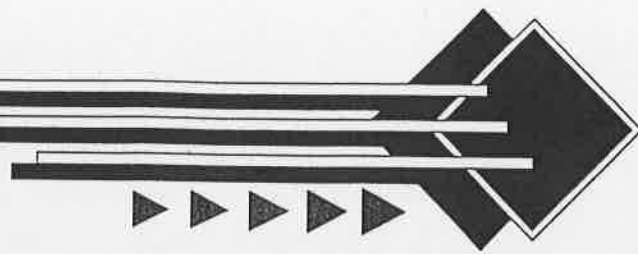
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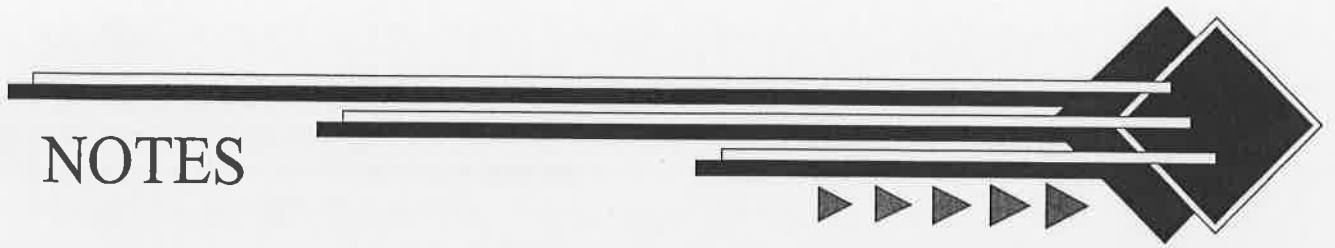
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