

# Sinclair Mathnet

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## FROM THE CHAIR



At the Department Retreat this summer I alluded to the fact that I could do several hours on the difference between students and customers and between education and a product. Here are the

first ten minutes:

A product is a tangible thing that takes up space. An education is an experience that changes not only the state of our knowledge, but also our understanding of ourselves. It changes our understanding of the part of the world that is around us, our understanding of the part of the world that is nowhere near us and probably our attitude about all of the above. Being an experience instead of a tangible item is the basis of some important differences between an education and a product. For example, a product can be faulty or we might just not like it and we can ask for our money back. But we usually have to return it to get our money. An education can also be faulty or we might just not like it and we can also ask for our money back. But we can't return it. We are stuck with it. We can ignore the fact that we have it and we can layer it over with a different education, one that we like better, but we can't give it back like we can a product.

When we purchase a product we become the proud new owner of the product. If it's a brand new sports car or a new house it might change our life dramatically. If it's a new television or a computer it might change how we spend our time or it might even help change our beliefs or values. But, on the other hand, it might not

change us at all. We might place it on a shelf and never look at it again. Or it might be a pair of shoes or a purse that we use every day but that doesn't really change us. It is not in the essence of a product to change us. But it *is* in the essence of an education to change us. That is the whole point of an education. It changes us. It changes the state of our knowledge and it changes our understanding of certain things. It makes us better communicators, better learners and better thinkers. Acquiring an education means we become something new. Acquiring a product means reducing our bank account in exchange for increasing our list of possessions.

So a product is tangible and an education is not. And a product may or may not change us, but it is within the nature of an education to change us. These are just two of the differences, but they alone are sufficient to show that a product and an education are two

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*It is not in the essence of a product to change us. But it is in the essence of an education to change us. That is the whole point of an education.*

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incredibly different things. What they have in common is little more than the fact that money sometimes changes hands in both cases and this is probably what causes people to confuse them.

Understanding the above leads to an understanding of the difference between customers and students. Customers acquire products. Students change themselves by acquiring an education. But more precisely, students study (or at least that is what students are supposed to do). (Continued on page 7)

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## Faculty Feature

Question: If you want to meet the president, where should you go?

Answer: Why, straight to the Math Lab at Sinclair Community College!

I am talking, of course, of the Student Government President, **Harsha Bulathsinghalage**. Harsha has been working in the Math Department at Sinclair since April 2002, and was elected to the Student Government position last spring. When asked why he ran for the position, he says, "I ran for Student Government President because Sinclair has been very good to me. I think it is a great school and I want to help it become an even better school by continuing to follow in the footsteps of our founder, David Sinclair, who said, 'Find the need and endeavor to meet it.' " Harsha also works as a tutor for Tutorial Services at Sinclair.

Harsha is from Sri Lanka, where his parents still live. The youngest of seven children, Harsha has two brothers and a sister living in Italy. While in Rome, he helped run a family-owned business, a pizzeria restaurant with a Sri-Lankan flair. When he moved to the USA, Harsha lived for a few weeks in Florence, Alabama. He and his wife then moved to Dayton, the home of the Wright Brothers, because he loves airplanes and flying. His interest in computers led him to consider ITT Tech, but a friend told him that he should really look at Sinclair.

Harsha started out as a Computer Information Systems major at Sinclair, and is now hoping to get a double major in Mathematics and CIS. Harsha adds, "I have taken many interesting classes, but I have had the most fun in group project classes; counting beans, flying helicopters and eating (uh... I mean weighing) chocolate kisses." He is referring to the statistics classes where the labs involve many hands-on experiences.

Harsha's background with computers has served the Math Department well. Not only has he been a student worker in the Math Lab, but he played a big part in creating the Math Lab's new website. If you have the opportunity to check it out, you will be impressed. Go to the Sinclair Math Department

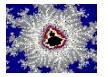
site and click on "Math Lab" or "Labs & Facilities," or use the address <http://www.sinclair.edu/academics/las/departments/mat/pub/mathlab/>.



When asked if he had any stories that he would like to share, he came up with one of his funniest memories. "Eleanor (my wife) and I had taken her sister to visit Venice during the winter. First stop, St. Mark's Square! After visiting the beautiful cathedral and going up the bell tower, we went out to feed the pigeons. I had my hair down so that it would keep my neck and ears warm. As soon as I held out my hand with the birdseed, the pigeons ATTACKED - not everyone else, ME!!! And mostly my hair and not my hands!! The other people with birdseed stopped to laugh and take pictures. They were now sitting on my arms, my shoulders and in my hair. We tried to shoo them away but when one left another took its place. We threw the birdseed on the ground, but they picked up a piece or two and returned to the spot in my hair or on my shoulders. Some of the birds even tried to take a few locks away for their nest."

As the International Students Club President for the year 2002-2003, Harsha had the opportunity to work with the Student Government Association. He says, "I became even more excited about all of the possibilities here. I would like to see the students at Sinclair become really excited about the place that they have chosen to do their academic work."

Susan Harris ■



## Part-Time Math Faculty!

Do you feel like a nomad, wandering the halls, dragging all your worldly possessions with you? The Math Lab (room 1315) has created a small space just for you. We have a computer station, printer, locking cabinet drawer, and a small table with chair reserved for your use. When building 16 is too far away, and you just need a little space to sit down and take care of some class chores, come hang your hat in the Math Lab! (Monday-Thursday 8 am to 8 pm, Friday 8 am to 4 pm, Saturday 9 am to 3 pm)

### DEPARTMENT COLLOQUIUM



We will have a Department Colloquium on Friday, October 22, 2004 at 2:30 p.m. in Room 1001. All members of our full- and part-time faculty are welcome, as well as students who are interested in mathematics. The speaker and title are as follows:

Mr. Anthony M. Ponder, Associate Professor of Mathematics, Sinclair Community College  
**"How to Design a Web Course and Live to Talk About It"**

Mr. John C. Sparks, Senior Engineer, Wright Patterson Air Force Base  
**"The Writing of a New Calculus Book: Joys and Frustrations"**

Refreshments will be served.

## Math Retention Website

The Math Retention and Success Program Web Site is now fully operational and you can navigate it and check it out. Feel free to email me any feedback at [moez.ben-azzouz@sinclair.edu](mailto:moez.ben-azzouz@sinclair.edu).

Link: <http://people.sinclair.edu/moezbenazzouz>

You can also access the site from the link provided in the Mathematics Department Web Page. By the way, only the retention specialist and AI have access to the student tutored Database.

Moez Ben-Azzouz ■



# Have You Heard About...?

Assistant Professor **Karl Hess** of the Mathematics Department was recently selected as a Project ACCESS (Advancing Community College Careers: Education, Scholarship and Service) Fellow. The project is a mentoring and professional development initiative for two-year college mathematics faculty in the first to third years of a full-time, renewable position.

## Assistant Professor Named Project ACCESS Fellow



The project's goal is to provide experiences that will help new faculty become more effective teachers and active members of the broader mathematical community.

Sponsored by the American Mathematical Association of Two-Year Colleges (AMATYC) and the Mathematical Association of America (MAA) and funded by a three-year grant from the ExxonMobil Foundation, Project ACCESS will support a group of 30 Fellows nationwide each year. Fellows will attend two consecutive AMATYC national meetings where they will participate in specially developed pre-conference workshops as well as regular conference activities. In the intervening year, Fellows will attend an MAA Section meeting near their home institution where they will participate in the MAA's Section New Experiences in Teaching (NExT) activities and the regular meeting. For the duration of the project, an electronic network will link Fellows with one another and with a group of distinguished mathematics educators.

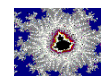
Karl graduated from Bowling Green State University with a Master of Science degree in 2003, and he also holds degrees from Wright State University and Edison State Community College. Karl has been with Sinclair as an Assistant Professor since Fall Quarter, 2003.

## ASME's newest Fellow

Part-time faculty member **Vince Miller** of the Mathematics and Developmental Mathematics Departments was recently honored as one of the American Society of Mechanical Engineers' newest Fellows. An engineer at WPAFB, Vince has made significant contributions to the understanding of aircraft noise transmission. His research developed alternative methods of determining power balance equations, prediction tools that don't require extensive computational approaches. Acoustic environment predictions within aircraft run-up facilities were of such accuracy that design and construction costs were greatly minimized, resulting in the redesign of all USAF noise suppression facilities. Vince is also active with the Dayton Section, serving on its executive board the past 25 years and co-chairing a Winter Annual Meeting first-ever technology transfer session. Vince has taught mathematics courses at Sinclair for over twenty years. We recognize and congratulate Vince on receiving this well deserved recognition.



*The Fellow Grade is the highest elected grade of membership within ASME, the attainment of which recognizes exceptional engineering achievements and contributions to the engineering profession.*



## Ohio Fall 2004 Meetings and Conferences

### Ohio Council of Teachers of Mathematics (OCTM)

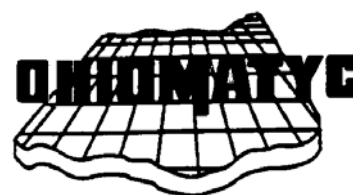
54th Annual Conference  
October 14-16, 2004  
John S. Knight Convention Center  
& Quaker Square Crowne Plaza  
Akron, Ohio



[http://www.ohioctm.org/Conference/OCTM\\_Conference\\_Info.htm](http://www.ohioctm.org/Conference/OCTM_Conference_Info.htm)

### Ohio Mathematics Association of Two-Year Colleges (OhioMATYC)

Fall 2004 Meeting  
October 15, 2004  
Raymond Walters College  
Cincinnati, Ohio



<http://www.terra.edu/ohiomatyc/>

For registration, directions or program information contact Treasurer Tony Ponder, Room 1330, 512-5305

### Ohio Section of the Mathematical Association of America (Ohio MAA)

Fall 2004 Meeting  
October 22-23, 2004  
John Carroll University  
University Heights, Ohio



<http://www.math.uakron.edu/ohiomaa/register/>

### Ohio Association for Developmental Education (OADE)

2004 OADE Conference  
October 20 – 22, 2004  
Hotel Lafayette  
Marietta, Ohio



<http://www.oade.org/conf.html>

### Ohio Mathematics and Science Coalition (OMSC)

The Fall Coalition Meeting  
was held recently  
in Columbus, Ohio



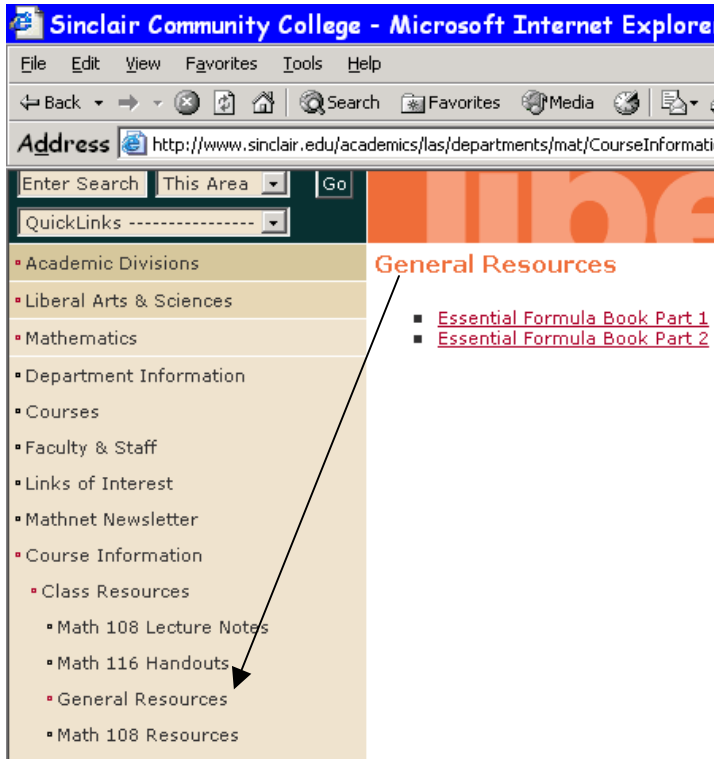
For membership: <http://www.oai.org/OMSC/MembersAffiliates.html>

For more information contact Treasurer Jesse Parete, Edison Community College



### The Formula Book

Remember that *The Formula Book* written by John Sparks is available on the Math Department web site. Follow the links shown below.

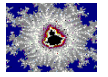


*The Formula Book* contains the formula sheets used by all of our math courses plus a variety of other useful and interesting tables such as this Wind Chill Table.

		WIND SPEED (mph)								
		5	10	15	20	25	30	35	40	
T E M P  °F	35	31	27	25	24	23	22	21	20	
	30	25	21	19	17	16	15	14	13	
	25	19	15	13	11	9	8	7	6	
	20	13	9	6	4	3	1	0	-1	
	15	7	3	0	-2	-4	-5	-7	-8	
	10	1	-4	-7	-9	-11	-12	-14	-15	
	5	-5	-10	-13	-15	-17	-19	-21	-22	
	0	-11	-16	-19	-22	-24	-26	-27	-29	
	-5	-16	-22	-26	-29	-31	-33	-34	-36	
	-10	-22	-28	-32	-35	-37	-39	-41	-43	
	-15	-28	-35	-39	-42	-44	-46	-48	-50	
-20	-34	-41	-45	-48	-51	-53	-55	-57		
-25	-40	-47	-51	-55	-58	-60	-62	-64		

## REMINDERS

- Be sure that unregistered students are not permitted to attend your class.
- Remember that classes should meet for all of the scheduled time. If you have to miss class please get a substitute from the sub list and let the Office know. If you can't find anyone contact the Office for help.
- Give students a proper review for chapter exams and final exams. This could include summarizing major concepts, theorems and definitions and doing example problems. It could include a sample test, but not one that is too similar to the actual test.
- Instructors should write their own tests rather than using the ones in the instructor's manual.
- Please remember to turn in a copy of your test as well as your grade distribution to your course coordinator.
- When clearing memories in students' calculators note that this may shift the calculator from degree to radian mode. Advise your students of this.
- All tests should be approximately one hour in length, even in classes meeting for more than an hour.
- When giving outside-of-class graded assignments, be sure students understand what resources they are allowed to use and what they aren't, and take steps to insure that the credit you give is for work that they have done. When working in the Math Help Room please be sure you are not helping students with graded assignments.



(Continued from page 1)

Here "study" encompasses a variety of activities including reading, listening to teachers, reviewing notes, doing research, following the instructions of teachers, discussing ideas with teachers and other students and most of all thinking. The fact that students are people who study to acquire an education is a very important point because it sheds light on the role of teachers. An education is not something that teachers possess and then give to students in exchange for money as they would a product. This is not to say that teachers don't possess an education (at least we hope they do), but teachers cannot give their education to students in exchange for money in the way that products can be given to customers. If that were the case, then the teachers would no longer have their education after it was given to the students. Remember that getting an education is not the same as receiving a product because it means changing ourselves. Students accomplish this by studying. And it is not the teachers who change the students in the same way that sculptors change a piece of clay or doctors change us physically by performing surgery. Students change themselves. Teachers simply provide direction, assistance and tools for students to use in accomplishing this self-change.

It appears the latest innovation is that we should think of students as *clients* instead of *customers* as suggested in the article *Students as Clients: Exploring the Metaphor Further* in the June/July issue of *The Teaching Professor*. The logic offered here seems to be that, whereas *customers* are inclined to think that they are always right, *clients* are more likely to assent that the lawyer, or the investment counselor, or in this case the teacher, is more likely to know what is best for them. So we should think of students as clients instead of customers. I suppose this is an improvement, but it still ignores the fact that defendants and investors are not in the business of changing themselves in the same way that students are.

Now I think this whole initiative in higher education to try to recast students as customers, or clients, or whatever else, is an attempt to address the concern that teachers and colleges have certain responsibilities toward students that they don't always execute, or at least that they don't execute well. Proponents of these analogies seem to believe that if everyone thinks of students as customers and education as a product, we will have a theoretical framework on which to base conclusions as to what the duties and responsibilities of teachers and colleges are towards students and we will be more likely to execute them better. The problem is that when we impose an analogy on students and education that doesn't really fit, we arrive at misguided notions about what those teacher and college responsibilities are. I've had a student confront me with the logic that, since they are the customer (students use this word frequently now), and since they are paying the teacher's salary, then the teacher works for them and so the teacher should be taking directions from them, not the other way around. Not all students are able to articulate the argument this well, but it is evident from talking to some of them that this underlying principle informs their thinking. It is difficult, to say the least, for a teacher to successfully give a student like this the kind of direction they need in order to acquire their education.

Instead of trying to decide whether we should think of students as customers or clients or something else, should we perhaps satisfy ourselves with thinking of students as students, that is, people who study to acquire an education? Starting from this simple premise we should be able to proceed through a logical sequence of implications to arrive at correct conclusions about what our proper role is as teachers without creating distorted views among students and others that arise from ill-fitting analogies.



## PART-TIME FACULTY RECOGNITION

A number of part-time faculty members were recognized at the Part-time Faculty Recognition Ceremony held Wednesday, September 8. These faculty members have provided a valuable and excellent service to the Department and to Sinclair students during their tenure at Sinclair and we would like to thank them for their willingness to invest of themselves at Sinclair and for their contributions to the Department and College. The part-time members who were recognized and their years of service are as follows:

**Five Year Award**  
Fred Conway, Jr.  
Robert Finch  
Velvettee Hux  
Kathleen Kirsch  
Janet Wilmoth  
David Wolodkiewicz

**Ten Year Award**  
Robert Bennington  
Achintya Mukhopadhyay

**Twenty Year Award**  
John Sparks

**Twenty Five Year Award**  
William Stevens  
Thomas Whitehead

**Thirty Year Award**  
Dean Aukerman



### Newton's Whit

Within the world of very small  
Exists the tiniest whit of all,  
One whose digits add no gain  
To a nit or single grain;  
And if a whit measures snow,  
Add one flake to winter's toll.



Even with size so extreme,  
Divisible still is scale by scheme;  
For whit over whit tallies well  
Numbering a world with much to tell:  
From optimum length to girth of stars,  
From total lift to time to Mars.

And thus we tout Sir Isaac's whit  
Praising both beauty and benefit,  
Yet, ol' Leibniz can claim...

A good half of it!

- John C. Sparks



### Harvey's Joke Corner

This is the 11<sup>th</sup> year of the Joke Corner. My thanks to the 1,000,000\* or more readers.



Here are some oldies enjoyed by S.C.C. presidents, past and present.

A favorite of Dr. Ponitz:  
Describe Dr. Chew after a difficult day at S.C.C. (rare though they may be). "Harvey WallBanger."

Enjoyed by Dr. Sifferlen:  
After losing four quarts of St. Pauli Girl beer, a man sang, "Has anybody seen my gal?"

Enjoyed by Dr. Johnson:  
Diploma Mill ad: Give us 60 minutes and we will give you a degree.

\* in binary