

TIME 2000 Hosts Fourth Annual Math Conference

By Deepak Joseph, Michael London, Samantha MacKinnon, Javaria Ramzan



Monique McLeod, Lysandra Bisal, Vicky Vartholomeos, Jindrzka Martin, Nancy Santos, Christina Dennison, Sarit Livi, Lalaina Andriananjason, Illyse Baum, Samantha MacKinnon

On Friday, November 18, 2005, TIME 2000 hosted its fourth annual conference, *Celebrating Mathematics Teaching*. A record breaking attendance of more than 300 high school students, 30 teachers, 80 undergraduate students and 15 college faculty members, were inspired by the keynote address delivered by Cathy Seeley, President of the National Council of Teachers of Mathematics (NCTM).

President Seeley has been a mathematics educator for over 30 years, and has helped children throughout the country as well as in Africa's Burkina Faso. During her presentation, titled "Teaching Math in a Flattening World—How You Can Make A Difference," she shared her teaching experiences and even some of her lessons. President Seeley stressed that students need to learn to create, innovate, question, connect, relate, and reason; mathematics does just that. She emphasized that education is the most important profession in this world. Mrs. Seeley explained that a math teacher must have a deep understanding of mathematics and knowledge of learning and teaching. One must be willing to keep on learning and try new things. We were fortunate to have the opportunity to speak with the President of a national organization.

In addition to the keynote, students attended two of the thirteen mathematics workshops offered. Cheriese Pemberton, a teacher at Long Beach High School, lead a presentation titled "Having Fun with Parabolas." She began by demonstrating that hitting a tennis ball into the air creates an upside down parabola. By relating mathematics to real life, Mrs. Pemberton instantly captured the attention of her students.

Edna Broukhim, a teacher at Baldwin High School, and Lena Grillo, a teacher at MacArthur High School, both TIME 2000 graduates, taught concepts related to Pascal's triangle through their lesson "It's Chaotic!" Students, who at first had no idea what Pascal's triangle was, observed the palindromic pattern of Pascal's triangle in poems and music. The visiting high school students were interested to learn that Pascal's triangle is also related to Sierpinski's triangle, which is

demonstrated by the chaos game. After the lesson, they advised TIME 2000 students that the first year of teaching will be tough and that you need to manage your time and put passion into all of your lessons. Other presentations were given by: John Chae, Paul Cinco, Ellen Fee, Gene Eyshinskiy, Irina Kimyagarov, Ron Narode, Rocio Saborido, Jacqueline Seenarraine, Mark Saul, Frank Signorello, and Susan Sladowski.

After the presentations and lunch, everyone gathered in the auditorium for a questions and answer panel moderated by Shari Eng (Senior). The panel consisted of Julio (Senior), Samantha (Junior), Randall (Sophomore), Ricky (Sophomore), Sarah (Freshman), and TIME 2000 graduate, John Chae (T-1). The panel discussion was motivating because the students were able to ask questions and openly express their interest in mathematics education. One high school student said, "I've never considered a career in math education but I will say the conference has changed my view. I think I can learn to love math instead of just liking it. Like Cathy Seeley said, math is like a game, an art, and science and I was able to see that today." Another student simply proclaimed, "Math is gr-r-r-r-eat!"

TIME 2000 would like to thank the Jim and Marilyn Simons Foundation for sponsoring the conference. We hope that their generosity will continue so that more High School students can experience this exciting mathematical experience.



Lena Grillo, Edna Broukhim, Rocio Saborido, Jacqueline Seenarraine

Have you met Dr. Fern Sisser?

By Kasey Luchan

As a TIME 2000 student, you will be fortunate to have a math class taught by Dr. Fern Sisser. Dr. Sisser has always had a love for mathematics and for helping others, which led her to become a successful mathematics teacher at Queens College. By the age of 20, she had already achieved many extraordinary feats: she graduated from Queens College, received her masters from Columbia University in Mathematical Statistics, married a classmate, began the

pursuit of her doctorate and started on her illustrious teaching career at Queens College. Last year, she received the 35 Year Service Award.

At Queens College, Dr. Sisser has taught Introduction to Probability and Mathematical Statistics (M241), Linear Programming and Game Theory (M247), and Nonlinear Programming (M248) and calculus classes. She taught these classes with such proficiency that, by the age of 25, she was awarded the inaugural CUNY Award for Excellence in Teaching from the Board of Higher Education. At 27, she received her doctorate, also from Columbia, in Operations Research. Her research deals mainly with nonlinear programming and its connection to interval analysis.

Recently, she has added Math 242, Methods of Mathematical Statistics, to her teaching repertoire. This class was created at the request of Dr. Artzt to better prepare TIME 2000 students to teach courses such as AP Statistics.

Although Dr. Sisser is not currently teaching calculus courses, she was videotaped teaching all of her pre-calculus lessons and many of her calculus lessons. These tapes are available in the Math Lab so that all students, not only the students in her classes, can benefit from her instruction.

Because of her desire to help all students and make a difference in their lives, during the winter and summer breaks, Dr. Sisser runs special mathematics immersion courses to prepare students to retake the CUNY Assessment Test. She finds these classes very rewarding because those students need her the most. She helps these students achieve their first success in mathematics, a subject that they may have previously hated due to their difficulties with the subject.

Dr. Sisser's desire to assist students extends past the field of mathematics. She is a member of the Queens College Pre-Med Advisory Committee. As the mother of two physicians, she uses her experience to help students who want to become doctors with the difficult application process.

Dr. Sisser received teaching awards from the Queens College Alumni Association and the Golden Key Honor Society. She is also serving as a member of the College's Committee on Honors and Awards, as Faculty Advisor for the Math Honor Society and as Chair of the student selection committee of Phi Beta Kappa. Because of her numerous accomplishments, Dr. Sisser has been offered opportunities to work in administrative positions. But, she has turned them down, preferring to be in the classroom. She enjoys the interaction she has with her students, enhanced by the fact that QC does not hold its math courses in large lecture sections.

Outside of the academic world, Dr. Sisser loves spending time with her grandchildren. She believes she has become a "cooler grandmother" due to her students and her experiences interacting with them. She also enjoys reading and traveling. She has been around the United States, traveling to Hawaii and Yellowstone National Park, saying it "compares to nothing else."



As for future mathematics teachers, Dr. Sisser offers a few words of advice: "Never overestimate the background of your audience; keep your

lessons self-contained and try not to assume students know prior material; break up a hard lesson into smaller digestible pieces and always connect difficult new material to something the students already understand." She also cautions, "Always revise your lessons and keep them new. If you don't know something, admit it. Don't fake it; it's not a crime." One of the reasons she enjoys teaching so much is the constant interaction and new experiences of the classroom; it's never the same, so cherish every moment.

Can the Plus Sign and the Minus Sign Tango?

By Damaris Herron

Have you ever taught someone to dance? If you answered yes, did you ever notice how much math is incorporated into the composing of a dance routine? I am the choreographer of the liturgical dance group for my church. Since I started the TIME 2000 program, I have discovered that math is in a lot of places I never thought it existed and dance is definitely one of them!

I took Dance 150 in the Spring 2005 semester and it was then that I really began to notice how integrated math was in dance. If you are dancing off step by just one count, too fast or too slow, it will be apparent to your audience. The music and your fellow dancers will either be dancing one step ahead of you, or one step behind you. The same idea applies to math. If you are off by one decimal place in a certain calculation, your solution will be completely inaccurate.

In a dance piece, the music can range from four to ten minutes and it is usually broken into certain time intervals. This is where math is key! For example, let's say we are going to dance to a four-minute song, or 240 seconds. Let one second equal one beat in our dance. Most choreographers teach in segments of eight beats. So you have thirty intervals of eight beats to work with. Along with all of those calculations, you have to factor in that certain step combinations are repeated and, a dancer's favorite, rest periods within the dance are also necessary. So to recap, a dancer has to keep track of the tempo of the music, spacing on the stage, body movement, and remember to keep a big smile on his or her face... almost as difficult as calculus!

Dance isn't just a manipulation of the body, but of the mind as well. Next time you are out dancing at a party or at a club, watching a ballet, or a music video on MTV, know that all those steps are timed, calculated, and counted down to the second. It's not as easy as it looks, like trying to picture the plus sign and the minus sign doing the tango!

Monstrous Math Mistakes (M³)



"The MTA has offered the transit workers a 3% raise each year for three years, for a total of 9%."

Voices from the Field

By Vidya Sriprasad(T-4)

This is the body of a letter that I wrote to Mrs. Weinman recently. I shared my experiences as a first year teacher. I also included a story that happened to me when I was a student in TIME 2000.

Teaching is very exciting. Everyday I learn something new from my students. I feel so lucky because they know so much and it's very refreshing. They bring knowledge that they learn from the news into the classroom. We discuss politics, economics, and government issues. Sometimes I feel like I am teaching social studies. My students can be pretty funny at times too. I have students telling me that sequences are decorations that make a shirt shiny.

It's hard to be a teacher and a student simultaneously. It seems that every weekend I am sick. I can't help it. Everyday there is a student that comes into the classroom sick with a cold. All of the teachers tell me that since I am a new teacher I have not yet built up a strong defense system.

I have a lot of help from people in the school in which I'm teaching. The principal is always surprising me by coming in the classroom to observe my performance. She is constantly giving me advice on anything that I can improve. I also have a mentor who comes in once a week. We talk about anything and everything, from bulletin boards, to retirement down the road. I am also fortunate to have a math coach helping me through my first year. She helps me with the classroom library and makes sure that the room is student oriented, such as having the bulletin boards and the word wall filled with students' work. Then I have my co-worker, who is also a 6th grade teacher, who gives me pointers on classroom management and classroom procedures. Overall, I have A LOT of help. I feel that with all of the hard work I completed in the TIME 2000 program and in my life thus far, I have reached and accomplished my dream of becoming a teacher. My new dream is to become a better teacher.



As a graduate of the TIME 2000 program, I would like to share an experience I had as an undergraduate. When I was a junior, I took High School Math from an Advanced Standpoint (M385W) with Dr. Artzt. The structure of the class was unusual because Dr. Artzt wasn't the teacher of the class, the students were. She put us into groups (what a surprise!) of five to six people. Each group was assigned a topic in math, and had to thoroughly learn the concepts, plan a lesson, and finally teach it to the rest of the class. All the while we had to put together a very large portfolio. I was grouped with David, Annie, Issac, Chana and Shayna. The day before it was due, my work and Shayna's work got erased! We frantically all worked together to rewrite two-fifths of the portfolio. We missed class, hoping that we could hand it in at the end of the day. When Dr. Artzt found out what we were doing, she was furious. She wasn't angry because we didn't have a portfolio to hand in, but because we decided to all miss class (six people missing out of twenty-four, not exactly subtle) and the group that was giving a presentation that day, lost a third of their audience. This group had worked just as hard as we did to put together their lesson. They needed our participation. We had deserted them

because we didn't want to be penalized for submitting our portfolio late.

On that day, I learned a very valuable lesson. Your grades and all of your hard schoolwork will not be as important as the relationships with friends, classmates, and professors, even long after you graduate. My fellow graduates, Annie, Chana, Marie, and I keep in close contact. We share a lot of stories about our students and our colleagues. We find comfort in each other because we are all in the same situation. If there is any advice I can give you on how to get through your four years of college and TIME 2000, it is to stick by your friends. Never take your relationships with your classmates and your professors for granted. Keep in touch with each other during the holidays and the summertime, even after you graduate. Believe me, all the things that I ever accomplished would not mean as much if I didn't accomplish them with my friends and professors from TIME 2000.

(Editors Note: Congratulations to Vidya and her fiancée David Chow(T-4) on their engagement!)

SuDoku

SuDoku is a Japanese term that means "single number". It is also a fun logic puzzle in which you have to place the numbers 1-9 so that they appear in each row, each column, and each 3x3 box, only once.

5	7		9	1	8	
	3					4
	8			6		
		2	4	5		
			6	9	5	
		5				9
3						2
	9	1		3		7 5

For more SuDoku puzzles, check out the next edition of *Reflections of TIME!*

The first person to submit the solution to the TIME office will receive a TIME 2000 gift!

Congratulations to Jinka Martin (T-6) on winning November's Su Doku!

Congratulations to:

Kristen Anstey on her engagement

Val Baci (T-3) and Mike Cardona (T-2) on their marriage

Elisheva Rubin (T-7) on receiving the Presidential Achiever's Honor Roll Award

Rocio Saborido (T-2) on her engagement

Jacqueline Seenarraine (T-2) on her engagement

Georgia (Tzortzos) Brucculeri (T-1) on her marriage