

# NCMATYC NEWS

Spring 2007



## Inside This Issue

*President's Message* .....1

*American Diploma Project* .....2

*A Note From Your Editor*.....2

*T<sup>3</sup> Chicago*.....3

*Chinese Visit to PCC* .....3

*Pi Day at Durham Tech* .....4

*Membership Report*.....5

*Acres and Acres of Math*.....5

*Wake Tech News* .....6

*Paul Erdos Memorial Lecture Series*.....7

*NCMATYC Elections* .....7

*MAT 263-Online* .....8

*Math League Coordinator* .....8

*Reports from the Conference* ..... 9-11

*Coastal Carolina News* .....11

*NCMATYC Leadership* .....12

## The President's Message

By Jan Mays

Elon University



The school year is coming to a close and we have another successful conference to celebrate. What a great opportunity to share ideas with our colleagues in North Carolina, South Carolina, and beyond! Downtown Charlotte was a beautiful setting for the conference and I want to thank Suzanne Williams and her crew at Central Piedmont CC for all their help and hard work in putting together one of our best conferences ever. Our keynote speaker, Frank Wilson, inspired us with stories of how using real-life applications in teaching math can make a difference in students' lives. For all the presenters who shared with us your ideas, successes, and struggles, we thank you. The conference couldn't happen without you. We also appreciate all the vendors who brought ideas and expertise and made the luncheon, breakfast, and Thursday evening's social event financially possible.

I appreciate all the input and support NCMATYC and the board has received since the conference on the college transfer math issues. I believe we will be well represented at the College Transfer Program Association meeting in April and I will keep you updated on the decisions by that group and possible impacts on our programs. It is such a pleasure to work with the dedicated professionals that make up NCMATYC and I believe that together we can make a real difference for math students in North Carolina.

Make sure to take some time for yourself this summer so you can return refreshed and ready in the fall.

*The NCMATYC NEWS is an official publication of the North Carolina Mathematics Association of Two-Year Colleges. Articles for publication and comments should be submitted electronically to [dzemanek@email.pittcc.edu](mailto:dzemanek@email.pittcc.edu). The deadline for the Fall 2007 issue is September 1, 2007.*

# ***The American Diploma Project Works to Strengthen Student Preparedness***

**By Chuckie Hairston    Halifax Community College**

Surveys of colleges, universities, and employers reveal that many high school graduates are lacking the English, math, and “soft” skills necessary for them to transition easily into higher education or into the workforce. ACHIEVE, Inc., is a non-partisan organization created by the nation’s governors and business leaders to assist in the creation of educational initiatives that will prepare young people for college or work. ACHIEVE, the Education Trust, and the Thomas B. Fordham Foundation, all nationally respected non-profit organizations, have established the American Diploma Project (ADP) to raise high school graduation requirements to help close the gap between high school and college or work. North Carolina is one of 29 states which are presently participating in the ADP. Governor Easley and the NC Department of Public Instruction (DPI) are leading our state’s efforts in this project and have given the ADP a high priority.

Nationally, members of the ADP team have had conversations with employers, colleges, and universities and have established a set of very ambitious benchmarks for high school graduates. In math, these benchmarks include content from Algebra I and II, Geometry, Data Analysis and

Statistics. In English, the benchmarks demand strong written and oral communication skills, as well as reasoning and analytical skills.

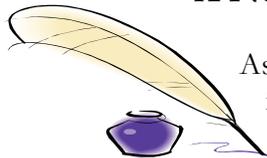
At this point, NC DPI has had a team, which included community college faculty, compare the state’s Standard Course of Study in Mathematics to the ADP Benchmarks. Now, further efforts are being made to align these two documents. Six NCMATYC members from across the state have been selected to be on the Postsecondary Outreach Committee to identify the skills necessary for students to be successful in their beginning curriculum mathematics classes. These NCMATYC members, along with math faculty from public and private colleges and universities and their counterparts in English and Language Arts, met in February and April to identify the necessary skills, to hear the results of faculty surveys from outside the committee, and to share classroom activities that strengthen these skills. The survey forms that were completed by participants at the NCMATYC Conference in March were included in the discussions.

To get additional information on the *American Diploma Project* or to find out what is being done in NC or across the country, go to: [www.achieve.org](http://www.achieve.org).



## **A Note from Your Editor**

**by Helen Kolman Central Piedmont CC**



As I wrap up this last issue as editor of the NCMATYC Newsletter, I would like to thank all of you for your support. I am grateful for all the articles you took the time to write. We, the readers, appreciate your sharing your ideas and experiences with us and I, the editor appreciate your thoughtful contributions. I am especially grateful to my colleagues here at CPCC for taking time to help with the mailing tasks so many times over the past two years and repeatedly contributing to the article pool.

I offer my best wishes to Daniela Zemanek from Pitt Community College as she takes over the editor’s position with the Fall,2007 issue. It would be a great welcoming gesture if we could flood her email box with newsletter articles this August.

Have a great summer!

*Helen*

## T<sup>3</sup> Chicago – Windy City Warm and Friendly

By Rob Kimball

Wake Tech Community College

The 2007 T<sup>3</sup> International Conference (Teachers Teaching with Technology) was held in Chicago in March. There was ice still on the lake when we arrived, but after several 60 and 70 degree days, much of it was gone when we left.

The T<sup>3</sup> conference focuses on the use of classroom technology that can improve the teaching and learning of mathematics. Sessions are facilitated by teachers who share their own experiences.

Obviously, there are a great many sessions on calculators – even on the new N-Spire. But most sessions are about how to teach specific content using technology as a teaching tool.

One tool that is being used a great deal in middle school classrooms is the Navigator. It is a wireless network that allows teachers to communicate with the students hand-held. For two-year colleges, it is a lot like the PRS clickers that are now being seen in many classrooms.

One speaker I would recommend, if you have the chance to hear her, would be Dr. Marcia Tate. She talks about brain-compatible classrooms – how students learn. This session was entitled, “Shouting Won’t Grow Dendrites.”

If you can’t make it to an international conference, there are many regional conferences every year.



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## Chinese Delegation Visit to PCC

By Daniela Zemanek

Pitt Community College



From February 24<sup>th</sup> through March 9<sup>th</sup>, Pitt Community College hosted a delegation of educators from Wuxi Institute of Technology (<http://www.wxit.edu.cn/>) in Wuxi, People’s Republic of China. The delegation members were: Dr. Dai Yong - President WXIT, Mr. Huang Nenggeng - instructor, Ms. Hua Yaqin - instructor, and Ms. Cui Fengjuan - Foreign Affairs Office. This visit was meant to continue the connections established last summer between PCC and Wuxi Institute, when several Tar Heel educators including Dan Mayo, the Assistant to the VP of Academic Affairs from PCC visited WXIT and other schools in China. That trip was sponsored by UNC-Chapel Hill’s World View program and was intended to be the beginning of a long resourceful relationship between WXIT and PCC.

tDuring their visit to the United States, the delegation members had a unique opportunity to personally observe

*Continued on page 4*

## Chinese Delegation *Continued from page 3*

and experience American higher education. Our college was one of the three colleges the delegation visited. Beside Pitt Community College they visited Green River Community College in Washington and Daytona Beach Community College in Florida. They were particularly interested in learning more about the U.S. community college system. While on our campus, the delegation conducted research related to curriculum development, program selection and development, and teaching methodology. Also, they were interested in establishing student, faculty, and staff exchange opportunities by observing classes and communicating with students, staff, and faculty.

I had the honor to have them observe one of my classes. We had a very interesting conversation following the class about the similarities and differences between our systems. I learned that WXIT has very motivated students. Dr. Dai Yong, the President of WXIT, told us that most of their students complete their programs of study and they do it on time. Our visitors were especially intrigued by the special connection that exists between our students and instructors.

They were surprised to learn that our students who enrolled in MAT 140, Survey of Mathematics, actually learn the traditional Chinese numeration- multiplicative grouping. During their visit in our campus, they not only learned about PCC but also experienced life and culture in Pitt County. While in Greenville, the group had the opportunity to experience southern hospitality; especially the female members of the group who were generously hosted by Mitzi Logan.

This visit was just another step toward building connections between our college and WXIT, and eventually establishing joint curriculum and cooperative options such as degrees or certificates. PCC has entered into a formal agreement with WXIT to pursue faculty, staff, and student exchange, trade of academic information and publications, and creation of instruction media and courses.



## Pi Day at Durham Tech

By Lee Ann Spahr Durham Tech



Mu Alpha Theta, Durham Tech's math honor society, raised \$305 selling pies and other round desserts during its annual Pi Day celebration Wednesday, March 14. Half of the proceeds go to the math honor society and half to the James R. Scanlan Memorial scholarship fund. Scanlan was a long-time math instructor at Durham Tech. Students and math faculty provided the sweets. Christopher Mansfield is the adviser for Mu Alpha Theta.

Pictured in the photo from left to right are: Jim Fleming (president of Mu Alpha Theta), Barry Oakley, Angela Fisher, Lee Ann Spahr, Chris Mansfield

## Membership Report

By Mitzi Logan

Pitt Community College

I am happy to report that we have 308 active members in NCMATYC as of January 2007. The eastern and central regions have 115 and 118 members, respectively, and the western region has 54 members. The remaining “other” members are associated with some other learning institution or retired. However, if I look at who is a member as of April 1 (no fooling), the membership in the east, central, and west will drop to 86, 94, 49 respectively and “others” drop to 14 members. As of April, we will have NO members from the following schools: Bladen, Edgecombe, James Sprunt, Johnston, Martin, McDowell, Southwestern, Western Piedmont, and Wilkes.

If you know any fellow mathematics instructors from your school or any other CC who are not members, please encourage them to join. Also, take a look at your mailing label...go ahead,

do it now...and check out your expiration date. If your membership expires in 2007, do me a BIG favor and renew now. That will save me LOTS of time and I thank you for it now!! If you need a membership form, you can find it at the NCMAYC web site [www.ncmatyc.com](http://www.ncmatyc.com) (click on About NCMAYC) or you can email me at [mlogan@eamil.pittcc.edu](mailto:mlogan@eamil.pittcc.edu) and I will send it to you.

It is nice to be back in the membership/secretary chair. Thanks for your vote. Please consider running for an office next year. It is a wonderful group to get to know but you’ll also be surprised how much you learn about the CC system while serving on the board! Once you get “hooked” into it, most folks go on to serve a second term. SO join us and discover the “treat” that is on that hook that keeps you coming back for more!

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## Acres and Acres of Mathematics

By Rob Kimball

Wake Tech Community College

The NCTM 2007 Annual Meeting and Exposition was held in Atlanta in March. As usual, it was a tremendous success with thousands of participants from all across the country.

The events were held in the Congress Center and Omni Hotel in Centennial Park. Once you felt comfortable negotiating your way among the 90 acres of space in the Congress Center, it was about time to leave. It is a huge place (see Notes below).

The meeting opened with an address from Thomas Friedman, author of *The World is Flat*. His address looked into the fuzzy future and the United States as it competes in a global market that has been flattened by events and inventions.



Congress Center: C Hall

*Continued on Page 6*

## Acres and Acres *Continued from Page 5*

He said the new “safe” jobs of the future will create a new middle – one that is less likely to be outsourced or digitized. These jobs will be done by people who can coordinate, collaborate, and leverage. It was a great way to start the conference.

Among the many other things I heard worth saying where:

- talk about a national curriculum for K – 12 mathematics.
- change, and how to make change happen within a system that resists change.
- technology, new ways to teach, learn, and assess.

If you have a chance to attend NCTM, it is worth it. Next year, the conference is in Salt Lake City.



Congress Center: Registration Area

Notes on Congress Center: ([www.gwcc.com/](http://www.gwcc.com/))

- The Congress Center's Building B exhibit halls are more than twice as long as Atlanta's highest skyscraper is high. From one end of these halls to the other, the earth curves 3/4 inch.
- Including meeting rooms, galleries, exhibit halls, kitchens and storerooms, there are more than 90 acres of floor area (3.9 million square feet) on multiple levels throughout the GWCC. The 33,000-square-foot Thomas Murphy Ballroom is on a level equal to that of an 11-story building.
- About 50 million kilowatts of electrical power are consumed annually at the Georgia World Congress Center - enough to supply the power needs for more than 3,000 homes each year.

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## Wake Technical Community College News

by Sharon Welker, Campus Rep

Wake Tech faculty appreciate the interactions with colleagues at the NCMATYC conference and the work of the Board and our host CPCC to make it a successful conference. We get even more for our money (and time) by sharing information from NCMATYC sessions with each other at departmental meetings.

Our faculty are involved in a variety of professional activities. We have 2 NCMATYC board members and 3 active volunteers with AMATYC. Several faculty enjoyed the trip to Cincinnati last fall, attending and presenting workshops at the national conference.

Faculty are involved on campus-wide committees that promote mathematical learning and improving student outcomes and opportunities: Distance Education, Math Across the Curriculum, North Campus Honors Program, Carolina Student Transfer Excellence Program (C-STEP), Black History Month Celebration, Advisory Committees, The Math Club, and our QEP implementation committee. For our QEP, we are working to document how students ACE learning: Analyze, Create, and Evaluate.

On March 29 we will host the regional qualifying round for the State Mathematics Contest. As you can see, we are just like all involved NCMATYC members – we multi-task all year long!



## Paul Erdős Memorial Lecture Series 23-24 March 2007

The Department of Mathematical Sciences at the University of Memphis organized in March 23-24, 2007 the eleventh Annual Lecture in the Paul Erdős Lecture Series. This conference is held each year in honor of the department's past relationship with Erdős. Paul Erdős is one of the century's greatest mathematicians. He received the Cole Prize of the American Mathematical Society in 1951 for his many papers on the theory of numbers. Erdős founded the field of discrete mathematics, which is the foundation of computer science. He was one of the most prolific mathematicians in history, with more than 1,500 papers to his name. One of the many prizes Erdős won was the Wolf Prize of 50,000 dollars in 1983. He donated most of his money to help students or as prizes for solving problems he had created.

Distinct mathematician Peter Lax from New York University delivered the 2007 Memorial

By Daniela Zemanek  
Pitt Community College

Lecture, entitled "Mathematics and Physics." In his speech he discussed "some interesting instances where mathematics has come to the aid of physics, and example where physics has suggested new problems and subjects to mathematics," such as the development of nuclear energy, weather prediction, and airplane design.

Peter Lax is the former president of American Mathematical Society (1977-1980). He is the recipient of many honors including the National Medal of Science (1986), Wolf Prize (1987), and the Abel Prize (2005).

This conference was organized by Béla Bollobás and was sponsored by The Institute of Combinatorics and The Department of Mathematical Sciences at The University of Memphis. Additional funding was provided by The National Science Foundation



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## NCMATYC Elections



NCMATYC elections are coming up. If you are interested in running for an office, or if you know someone who would be a good officer, contact Chuckie Hairston at [hairstonc@halifaxcc.edu](mailto:hairstonc@halifaxcc.edu). Even if you have not held an office before, this is your chance to jump right in and help NCMATYC move forward. For information on the duties of the various positions, go to the NCMATYC website and take a look at the constitution. NCMATYC needs you!



## MAT 263 – On line

By Deborah S. Benton Wake Tech CC

I put off teaching on-line as long as I could. Being the lead Instructor for Mat 263 at Wake Technical Community College, I felt I had to give it a try. First we offered a hybrid version. Then, after three semesters, and low enrollment, I offered to teach the course on-line.

Since this course is technology based, teaching on-line is easy. Our text is a CD, Networked Business Math by Brian Felkel and Robert Richardson. Excel is used instead of a calculator. Power point notes are posted for each section. Blackboard is used to deliver the information. I video taped myself collecting the data for their first project. So, everything was ready to go on-line.

We also screen the students before we allow them to enroll. This way we make sure they have the technology they need and some basic knowledge of Word and Excel.

With a totally on line course, you have to give the students all the information they need to succeed in the course. It is important that you put problems on the discussion board every week and have students respond. I use their response as their attendance each week. Quizzes are given every week on line to be sure they understand the material.

The student must take responsibility for his/her own learning in an on-line course. They must be self motivated. The students that make it through an on line course know the material as well, as if not better than a student from a seated class.

On-line teaching changes our role as Instructors from teacher to facilitator. It is new and challenging everyday and loads of fun. You may want to give it a try!

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## New NCMATYC Student Math League Coordinator



Chris Mansfield from Durham Tech CC has graciously agreed to take on the coordinator duties for the Student Math League for North Carolina. If you have questions about participating in the SML, please address those questions to Chris at [mansfieldc@durhamtech.edu](mailto:mansfieldc@durhamtech.edu).



## REPORTS FROM THE

# 2007 NCMATYC/SocaMATYC Conference

### Conference Highlights

By Laura Tucker, Central Piedmont CC

As usual, this year's conference was a fantastic way to share ideas and come away with some new "tricks". In Valerie Maley's session on **Developmental Mathematics: A Sensory Experience**, I learned of a technique for teaching factoring to kinesthetic learners via algebra tiles. I was entertained by Jay Lehmann's "risqué" math song during his **Quadratic Curve Fitting** session! In Ron Harshbarger's **Connecting Algebra with the Management, Life, and Social Sciences** session, he shared a great investment example involving twins who enter the workforce at the same time but don't start investing for their retirement at the same time. At Chuckie Hairston's **Little Things Can Make a Big Difference**, we had

to actively participate and get out of our comfort zone. She demonstrated an easy way to split the class into groups by giving each attendee a playing card and having us forms groups

*Chuckie Hairston*

based on a common characteristic of each member's card. Finally, I discovered how math is like a hamburger (and how a #2 pencil is like marriage!) at Faye Childress' and Jackie MacLaughin's session. At their session, participants experienced "forced analogies" which forced me to use a different part of my brain and see things from a different perspective!



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### Fourth Annual Faculty Math League Competition

By Lee Ann Spahr Durham Tech

One of the highlights of the NCMATYC Conference each year is the Faculty Math League mathematics contest, modeled after AMATYC's Student Math League contest. Over the past four years, the competition has definitely become a tradition and is growing in popularity. This year the participants took a test developed by Chuck Wessell, and there was a three-way tie for second place and a two-way tie for the first place score.



**The results** (in alphabetical order):

#### **First-place**

Cao Nguyen (Central Piedmont CC) *(Pictured on the left)*  
Chris Mansfield (Durham Tech CC)

#### **Second-place**

Tim Beaver (Isothermal CC)  
Emma Borynski (Durham Tech CC)  
Mary Pearce (Wake Tech CC)

## A New Approach to Learning Styles

By Kim Ward

One of the most compelling sessions at NCMATYC was “Teaching to the Four Learning Styles – ‘You’ve Never Seen It Like This Before’” presented by Valarie Wright and Faye Childress of Central Piedmont Community College. We began by taking a “Learning Style Inventory:” a series of statements we ranked by how closely they matched our individual habits and preferences. From our answers, we were able to visualize and categorize our learning style based on the quadrants of a circle. We were then given insights into how students with different learning styles excel in the classroom as well as tips for improvement.

Skeptical at the beginning, I was quickly impressed by the inventory and graphical representation. It took me many years to understand how I learn and unfortunately I do not

see that met cognition in many of my students. This activity could help them considerably. In my experience, I have found that many students put an incredible amount of effort into their studies but do not receive the desired outcomes. With information about how they learn best, they will be able to adapt their studying and learning. They will be able to study smarter, not just harder.

To this end, I plan to incorporate this activity into my Statistics course next semester during the first week. Not only will the students gain insight into their own learning styles, but it will be a springboard for discussions about types of variables (qualitative v. quantitative, continuous v. discrete, levels of measurement) and beyond. They may even find it as compelling and fascinating as those of us at the presentation did.



## Best Practices in Developmental Mathematics

By Angela Fisher

Elayn Martin-Gay's presentation on "Best Practices in Developmental Mathematics" at the NCMATYC/SOCAMATYC meeting in Charlotte was both informative and delightful. The participants were fortunate to share in Elayn's (a professor at the University of New Orleans) enthusiastic attitude toward developmental education and her many tips for helping students at this level succeed. We left the workshop with a plethora of interesting data to share with students, articles on maintaining high expectations for students, and check lists for improving study skills

to share with our students. One idea I particularly liked was to have students write down their goals for the class, as well as how they plan to achieve the goals, at the beginning of the semester. Later if the students are having difficulty, return the paper to them to remind them of their goals and strategies for success in order to help them get back on track.

If you missed Elayn, you missed a workshop packed with good ideas and a presenter whose enthusiasm for teaching developmental mathematics was quite contagious!

# NCMATYC-SOCAMATYC Conference Review

By Lee Ann Spahr Durham Tech



Thanks to everyone involved in planning our joint NCMATYC-SOCAMATYC Conference this year.

Suzanne Williams (*Pictured to the left.*) and the entire Central Piedmont crew did a fabulous job in making sure everything ran smoothly.

Having attended every NCMATYC Conference since 1991, I have seen a lot of change over the years, and our conferences just continue to

improve with every passing year. This year we were extremely fortunate to have representation from both two-year and four-year colleges from North Carolina and South Carolina.

In my opinion, one of the most beneficial aspects of attending the NCMATYC Conference is that of meeting your colleagues from across the state and learning from each other. I will readily admit that some of the most valuable and useful information I have obtained from NCMATYC has occurred as a result of hallway and mealtime conversations with my peers.

Again this year we had excellent presentations, covering topics ranging from raising

high school standards, appropriate placement testing, classroom techniques, and various educational technologies, including an outstanding Maple presentation. Additionally, we had helpful sharing sessions in which we discussed the various means by which we can most effectively incorporate Beyond Crossroads into our curricula. Thanks to Phyllis Patterson for all of her work in scheduling the sessions so expertly.

We had excellent meals and a terrific social hour this year, and we were most fortunate to have four textbook authors with us, Jay Lehman, Frank Wilson, Elayn Martin-Gay, and Ron Harshbarger. We were also very fortunate to have numerous representatives from various publishing and technology companies as well as an ACT consultant. Having these professionals available for consultation alone is well worth the effort expended in attending the conference.

If you have not been a regular attendee of previous NCMATYC Conferences, please plan to attend future conferences. The benefits are tremendous, and it is the best possible way in which to stay informed regarding statewide mathematics education issues.

I am certainly looking forward to attending NCMATYC in Winston-Salem in 2008!!

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## Coastal Carolina Community College

By Kelly Richardson

There's a lot going on here at CCCC lately. We have just moved into a new building, officially named the Mathematics and Science Technology building. The building is very well equipped with a computer, projector, and Smartboard Symposium in every classroom. In addition to math classrooms, the 2-story building also contains 2 computer labs, a Math/Science tutoring center, and lab classrooms for Geology, Physics, Chemistry, EMS, and Early Childhood Education. We are very pleased and thankful for all of these new educational resources that are available to us and our students.

We are also very busy preparing for our upcoming SACS evaluation this fall. Our focus for our Quality Enhancement Plan (QEP) is Student Engagement. Every member of the faculty and staff is involved in this extensive project.

CCCC is also hosting the 21<sup>st</sup> Annual Southeastern Regional Math Contest on March 29, 2007. This is a contest we sponsor every year for approximately 200 area high school students to compete in Algebra I, Algebra II, and Geometry. The top winners in each category are eligible to compete at the state level at NC Wesleyan College.

## 2006 – 2007 NCMATYC Leadership

<b>President-Elect</b> Phyllis Patterson Wayne CC 919 735-5151 ppatt@waynecc.edu	<b>President</b> Jan Mays Elon University 336-278-6297 jmays@elon.edu	<b>Past President</b> Chuckie Hairston Halifax CC 252 536-6378 hairstonc@halifaxcc.edu
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