Detailed Program: Friday

11:30 – 12:20 **Lunch**
Grille 1-2-5

12:30 – 12:55

Session 1 **Hands - on activities for finding P-values**
Keuka

Presenter: Pam Burch, Virginia Commonwealth University

Presider: Kathleen Speicher, Corning Community College

One of the important concepts taught in a beginning statistics course is the P-value. A common misconception is that the P-value is the probability the null hypothesis is correct. The presenter will demonstrate hands-on activities which can be used in the classroom to illustrate what a P-value tells us.

Session 2 **Four is the Magic Color**
Seneca

Presenters: Ida Klikovac, Nassau Community College
Mike Riedinger, Nassau Community College

Presider: Brian Milleville, Erie Community College - South

"The Four Color Theorem" will be explored via a hands-on activity involving group collaboration. By coloring the map of the United States using the minimum number of colors possible, this famous theorem will be explored, with an emphasis on its simplicity of application but difficulty of proof. Discussion will follow regarding the complexity of the theorem and its lack of a mathematical proof. The focus will be on how to make this topic more accessible to high school and college students.

12:30 – 1:30

Session 3 **Excellent Escher**
Cayuga

Presenters: Patty Owens, Onondaga Community College
Candice Dance, Onondaga Community College

Presider: Joseph Straight, SUNY Fredonia

We will demonstrate a lesson that was presented to students which incorporated the concept of tiling the plane and using Escher's techniques of manipulating polygons to tile the plane.
Participants will be given the opportunity to practice this method.

1:05 – 1:30

Session 4 **Calculus for Probability**
Keuka

Presenter: Julie Croteau, Corning Community College

Presider: Dianna Cichocki, Erie Community College

This talk, motivated by CCC's calculus-based probability course, will provide specific examples of calculus used in developing theory in probability and in solving probability problems. Those interested in seeing how calculus is used in a course just beyond Calculus II are an ideal audience.

Session 5 **A New Approach for Business Calculus**
Seneca

Presenter: Barbara Cavalieri, Dutchess Community College

Presider: George Hurlburt, Corning Community College

Looking for a way to make Business Calculus more exciting and relevant for students? The presenter will share her experience using Excel and the modeling of real-life data as the foundation for the course. Come learn how this powerful approach is making calculus come alive for business students!

1:40 – 2:30

Session 6 **Motivate your Students with Mastery Learning**
Keuka

Presenter: Lisa Rickel, Hawkes Learning Systems

Presider: Lynn Hayes, Corning Community College

Innovation in the classroom and implementation of technology in mathematics are proven practices to promote student success. Hawkes Learning Systems' unique approach to mastery learning provides the software solution to motivate your students to excel in math. Come learn how to integrate Hawkes in your courses for guaranteed success!

Session 7 **Nspired Learning: Now in COLOR!**
Seneca

Presenter: Dana Morse, Texas Instrument

Presider: Ken Mead, Genesee Community College

Come see the latest from Texas Instruments. 3D Graphing, Color Graphing, Import Images for Real World Modeling, and More! Create an interactive math classroom with the educational technology from Texas Instruments.

Session 8 **Stop the Madness -- Adopt a Textbook Students will Actually use**
Cayuga

Presenter: Jennifer Teague, Thinkwell

Presider: Michael Higgins, Erie Community College - South

Studies have shown that 80% of students don't read their textbook, which means that 80% of students show up to class unprepared. We also know that 30% of all freshman drop out of college within the first year, and 54% of all college students drop out without a degree. Thinkwell helps you change that cycle by offering your students a textbook they like. Discover why students love using Thinkwell and come to class ready to succeed!

2:40 – 3:30

Session 9 **Give your class some TLC**
Keuka

Presenters: Mary Beth Orrange, Erie Community College
Dianna Cichocki, Erie Community College
George Hurlburt, Corning Community College

Presider: Sue Kutryb, Hudson Valley Community College

Every Class needs some TLC, come and hear what the AMATYC ITLC (Innovative Teaching and Learning Committee) suggests! Three NYSMATYC members are active in AMATYC's ITLC and will share ideas from others across the country.

Session 10 **EVERYDAY MATH... GONE WRONG! or... Someone Has To Take This More Seriously**
Seneca

Presenter: Rick Rupprecht, Jamestown Community College

Presider: Lynn Meslinsky, Erie Community College - South

We'll take an entertaining look at some of the mathematical blunders that appear in the news, on television, on the internet, and in the movies. If you have good examples, please bring them to share. Better yet, get in touch with me before the talk so I can include them with my examples. (rickrupprecht@mail.sunyjcc.edu)

Session 11 **Functions Rule!**
Cayuga

Presenters: Arnavaz Taraporevala, New York City College of Tech.
Nadia Benakli, New York City College of Technology
Satyanand Singh, New York City College of Technology

Presider: Julie Croteau, Corning Community College

We will present a dazzling display of functions using technology to illustrate techniques that span different parts of calculus. We will take you for a ride along extremes and three dimensional saddles; generate animations of two and three dimensional Riemann sums, converge upon sequences and work our way through vector fields as we conservatively view line integrals.

3:30 – 4:00 **Break: Please Visit the Vendor Exhibits**

4:05 – 4:55

Session 12 **How can we measure teaching and learning in mathematics?**
Keuka & Seneca

Presenter: Dr. Maria H. Andersen, Muskegon Community College

Presider: Ernie Danforth, Corning Community College

There's no need to re-invent the wheel with regards to the measurement of teaching and learning in mathematics. Well-researched definitions and inventories can provide us with many insights about the beliefs and skills of math students as well as the perceptions and instructional styles of their instructors.
Track: Research-Based
Goals or Outcomes

- Learn about the Mathematics Instructional Practices (MIPs) researched and developed in 2009 (some of my original research)
- Learn how to identify different instructional styles, and measure them using the ATI.
- Learn how the environment effects what instructors do in actual practice, and how to measure this with the PTEI.
- Learn ways to measure how students perceive mathematics (CMQ), perceive their learning environment (CPQ) and how students approach their learning (SPQ, ASI, ASSIST).
- Learn about some of the mathematics concept tests currently under development (PCA, CCI, EACI)
- What can we learn from successful subject-specific educational research teams, like Physics Education? How can we become better at producing high-quality research by crowdsourcing our studies?

5:00 – 5:50 **Executive Board Meeting**
Directors Room

6:00 - 7:00 **Wine Tasting with Past, Present and Future Presidents of**
Lobby **NYSMATYC,** hosted by Gene Losey, GCP

7:00 – ???? **Dinner** (Scholarship and Math League Winners announced)
Keuka & Seneca

Detailed Program: Saturday

6:15 – ???? **Estimation Run**
Lobby

7:00 – 7:50 **Breakfast**
Grille 1-2-5

8:00 – 8:50

Session 13 **The Home Team Advantage in Sports Play-offs**
Keuka

Presenter: Joseph Browne, Onondaga Community College

Presider: Josh Hammond, Jefferson Community College

A phenomenon of sports that we often hear about, particularly at play-off time, is the home field (court, rink, etc.) advantage.
But how significant is this in a series of games where the teams travel back and forth between the cities? This presentation will primarily examine the theoretical advantage, but will also compare results with actual professional sports results.

Session 14 **Wish Your TI Calculator Had a Function to ... ? Let's Program It!**
Seneca

Presenter: Joseph Straight, SUNY Fredonia

Presider: Rick Rupprecht, Jamestown Community College

Programming a calculator is a great way to extend its capability. Plus, writing programs develops logical reasoning and problem solving skills. In this workshop, participants will learn how to write programs for the TI-Nspire (a skill which easily transfers to other TI calculators). For example, we'll program the function euclid(a,b) that, given positive integers a and b, returns the list {d,s,t}, where d is the greatest common factor of a and b and s and t are integers such that $d = as + bt$.

8:00 – 9:55

Session 15 **Math On the Web Themed Session**
Cayuga

Presenters: Ken Mead, Genesee Community College
Jay Hurlburt, Corning Community College
Dianna Cichocki, Erie Community College
Jodi Cotten, Westchester Community College
David Usinski, Erie Community College
Mark R. Marino, Erie Community College – North

Presider: Mary Beth Orrange, Erie Community College

Veteran Math Teachers Share their experiences using the Internet for their math classes

8:00 – 8:15 Quickly Create Desktop Videos Using Screencast-o-Matic

Screencast-o-Matic is a free web-based computer screen recorder that allows us to rapidly create videos at any time, using any java-enabled browser, and then instantly upload the videos to share with our students. In this demonstration, I'll run through the basics of using ScreenToaster to record a screen session, and then upload the video to screentoaster.com and YouTube. Additionally, you will see how to embed these videos right inside your CMS without having to send your students to external sites like YouTube (we all know what happens when our students go there!)(**Mead**)

8:20 – 8:35 Using Facebook to Communicate With Today's Students

This presentation will demonstrate how the instructor provides web resources and other information to students using Facebook in her Calculus class without compromising her private information associated with her personal Facebook account. **(Hurlburt)**

8:40 – 8:55 Beyond Tables - Introductory Statistics

Often when one thinks of Introductory Statistics, formulas and tables come to mind. While these are still an integral part of the course, technology has allowed a greater conceptual understanding of material that tends to be computational in nature. This presentation will provide the participants with various JAVA applets that may be used to enhance the teaching of Introductory Statistics. (**Cichocki**)

9:00 – 9:15 Online projects for F2F and online classes

Ideas for online projects in Liberal Arts math courses that are applicable to life after college. Student feedback has been great and has made the presenter want to write more.... which is why she is on sabbatical this semester (**Cotten**)

9:20 – 9:35 Wolframalpha, it's not just another search engine

As the Internet has grown and evolved over the past fifteen years, a variety of search engines have emerged. Although each one proclaims to better than the rest or fulfills a specific niche, along comes a game-changer. Wolframalpha is not your average search engine and defines itself as "the world's first and only computational knowledge engine." In this workshop, we will explore how wolframalpha.com answers a variety of mathematical problems. However, this is only the tip of the iceberg. (**Usinski**)

9:40 - 9:55 2011 Online Instruction: Current, Sparkling and Engaging

Describes how you literally enjoying each of the quick-paced, energetic and learner-centered vignettes featured in this presentation! (**Marino**)

9:00 – 9:50

Session 16 **Designing a Multi-Disciplinary Math, Reading, and Writing Course**
Keuka

Presenter: Dona Boccio, Queensborough Community College

Presider: Jane Tanner, Onondaga Community College

Through a grant from the National Endowment for the Arts' Big Read initiative, the presenter developed and taught the math component of a multidisciplinary course for at-risk high school students. The curriculum is based on *The Things They Carried*, a work of fiction about the Vietnam War. Using the novel as a centerpiece, three faculty from the Basic Skills, English, and Mathematics departments developed the program, focused on basic reading, writing, mathematics, and study skills.

Session 17 **The Self-Regulated Learning: The Theory and Practice**
Seneca

Presenters: Sandie Han, New York City College of Technology
Grazyna Niezgoda, New York City College of Tech.

Presider: Alexander Atwood, Suffolk County Community College

The Self-Regulated Learning (SRL) method is composed of three cyclical phases: planning, practicing, and the evaluating phase. Mastering the three phases is necessary for anyone who wants to become a self-regulated learner, regardless of one's experience with the task, or whether the learning is for a hobby or a profession. SRL activities such as goal setting, self-efficacy judgment, and performance evaluation have been implemented in math classrooms to increase students' self-awareness and effectiveness in learning.

9:50 – 10:20 **Break: Please Visit the Vendor Exhibits**

10:20 – 11:10

Session 18 **The Teacher as Coach**
Keuka & Seneca

Presenter: Herb Gross, 1st President of NYSMATYC

Presider: Sam McInroy, Corning Community College

In sports we recognize that the attributes that make a person a good player are not the same attributes that make a person a good coach. In terms of this analogy, most degree recipients have demonstrated that they play their subject well. An academic degree, by itself, is no indication of how well a person coaches a subject. The conceptual question then becomes:

What is it that distinguishes the teacher as "coach" from the teacher as "player"?

My subjective answer to the above question is:

The teacher as "coach" must be able to:

- Make the material relevant to the needs of the students. Quite often, students see things differently from what the instructor finds to be interesting or important. The point is that things that may inspire or motivate us do not do the same for them.

- Develop a mastery learning delivery system that allows students to learn material at their own pace. It is tragic that so many students fail a course for no greater reason than the pace at which they learn is slower than the often arbitrarily prescribed pace of the lock-step classroom.

- Provide a live support system that allows students to find the type of encouragement that is often required in order to persevere through a strenuous course. That is we should never neglect our "subjects" while we teach our subject.

The talk will highlight how I implemented these three guidelines in my own teaching, especially at the developmental (I hate the word "remedial") level.

11:20 – 12:10 **Business Meeting**
Cayuga

12:15 – 1:05 **Lunch** (Estimation Run Winners Announced)
Grille 1-2-5

1:15 – 1:40

Session 19 Keuka

Mathematics as a Second Language

Presenter: Herb Gross, 1st President of NYSMATYC

Presider: Tim Grosse, Jefferson Community College

1. People see numbers the way scientists and engineers see quantities; that is, as adjectives, not as nouns. For example we have seen 3 people, 3 apples. 3 cats, etc. but never "threeness" by itself.
2. When an algebraic concept is difficult to understand, paraphrasing that concept can turn it into one or more simpler concepts. An example of paraphrasing is changing a problem that a calculator cannot do (for example 3 + ___ = 5) into **equivalent** problems that it can do (for example, 5 – 3 =___)..

How these two ideas unify all of basic arithmetic is the theme of this presentation.

Session 20 Seneca

Times Tables Into Algebra

Presenter: Bruce Sanford, Borough of Manhattan CC

Presider: Zuming Li, Borough of Manhattan CC

As a math lecturer at the Borough of Manhattan Community College, Bruce Sanford specializes in the Developmental Math Courses from arithmetic through algebra.
"Times Tables Into Algebra" highlights the crucial need to leave no stone unturned in setting the wheels in motion for success in arithmetic, as well as algebra. Times Tables Talent is the Secret to Success and it must be realized that every step and level of developmental growth relies on Times Tables Talent, even through the factoring of trinomials and solutions of Quadratic Equations. So, to slip and slide and glide over it casually, and take it for granted, usually meets with high anxiety, low self-esteem, and failure all along the way.

Session 21 Cayuga

Two Easy Number Theory Programs for the TI-89 (or to Import to Your Calculator)

Presenter: Luis F. Moreno, Broome Community College

Presider: Sandie Han, New York City College of Technology

First, we look at an integer factoring program that I call "The Gobbler", as a flow chart and on the TI-89, seeing why it is efficient. Next, have you ever wondered how long the repeatend of a given rational number is? We will apply an easy theorem of Gauss that answers the question, and implement it on the TI-89 (1/17 is a piece of cake now). For anyone who likes to play with numbers on their calculator. TI-89 useful, but not necessary.

1:50 – 2:40

Session 22 Keuka

Redefining Math Education with *Clickable Math*™

Presenter: Louise Krmpotic, Director, Business Development Maplesoft

Presider: Julia Kim, Fashion Institute of Technology

Maplesoft has introduced one of the most exciting concepts in math software history: *Clickable Math* - powerful mathematics delivered using visual, interactive point-and-click methods. *Clickable Math* is launching a new generation of teaching and learning techniques in mathematics. At the Maplesoft presentation, find out how *Clickable Math* is revolutionizing mathematics education.

Session 23 Seneca

What's New with TI-Nspire

Presenter: Bill Caroscio, Corning Community College

Presider: Kimberley Martello, Monroe Community College

This will be a hands on session. Participants will have the opportunity to use the TI-Nspire handhelds to experience the new features of the current OS.

Session 24 Cayuga

MyMathLab/MYLabsPlus.

Presenter: Sara Ouellette, Pearson Technology Specialist

Presider: Joan Page, Onondaga Community College

MyMathLab is a series of online courses that accompany Pearson's textbooks in mathematics and statistics. Since 2001, MyMathLab--along with MyStatLab and MathXL, have helped over 9 million students succeed at more than 1,900 colleges and universities. MyMathLab engages students in active learning—it's modular, self-paced, accessible anywhere with Web access, and adaptable to each student's learning style—and instructors can easily customize MyMathLab to better meet their students' needs. Come learn more!

Course redesign is the process of redesigning an entire course (not just individual classes or sections) to achieve better learning outcomes and lower costs by taking advantage of the capabilities of technology. Course redesign is not just about putting courses online. It is about rethinking the way you deliver instruction, especially large-enrollment core courses, in light of the possibilities that new technology offers. MyMathLab is the technology of choice for over 85% of all redesigns.Anyone interested in *improving student results* is encouraged to come hear why MyMathLab has been so successful. And to conclude, a demonstration and discussion of MYLABSPLUS, what it is and how schools in NYS are using it to enhance their MML courses.

2:50 – 3:40

Session 25 **BATTLE of the MINDS II**
Keuka

Presenters: Kate Danforth, Corning Community College
Raymond LaBounty, Corning Community College

Presider: ?????????????

Teams will compete for fun and prizes! Make your own team of no more than four people or join a group at the session. Trivia and math puzzles of varying levels of difficulty will challenge the participants. Come and join the fun!

Session 26 **Directional derivatives, slope, and parameterizations.**
Seneca

Presenter: Brian Milleville, Erie Community College - South

Presider: Dianna Cichocki, Erie Community College - South

The definition of directional derivative is typically not well understood. Why is a unit vector required? Careful analysis of this definition will force us to discuss the slope of a line in three dimensions and also parameterizations. Translating this discussion back to lines in the plane, we aim to show which interpretations of slope generalize to higher dimensions most effectively. For example, should we always to choose the "run" to be 1 when graphing lines?

Session 27 **Transform Antiquated Word Problems into Lively Authentic Applications**
Cayuga

Presenter: Jay Lehmann, College of San Mateo

Presider: George Hurlburt, Corning Community College

Antiquated, contrived word problems such as value problems and interest problems can be transformed into authentic applications by using functions rather than equations in one variable to analyze a multitude of scenarios within one situation. Curve fitting applications will also be discussed. The presenter will sing a math love song.

3:40 – 4:10 **Break: Please Visit the Vendor Exhibits**

4:10 – 5:00

Session 28 **Playing to Learn Math?**
Keuka

Presenter: Dr. Maria H. Andersen, Muskegon Community College

Presider: Mary Beth Orrange, Erie Community College - South

Shifting our teaching philosophy to more exploration and less telling - it makes a parallel between learning algebra and playing a well-crafted game. Participants also get links to great free digital games and my collection of non-digital games for algebra through calculus (which they can print, assemble, and use).

Session 29 **Exploring Love through Differential Equations**
Seneca

Presenter: Abby Todd, Broome Community College

Presider: Joseph Browne, Onondaga Community College

The fate of a love affair between Romeo and Juliet was studied by Steven Strogatz through a system of linear differential equations. This system will be introduced and an analysis of this system explored. Any who are interested in either differential equations or love (or both!) should expect to be entertained.

Session 30 **Book Report: *Why Don't Students Like School*** by Daniel T. Willingham
Cayuga

Presenter: Lynn Meslinsky, Erie Community College – City

Presider: Barbara Cavalieri, Dutchess Community College

Lynn Meslinsky will discuss this book and its implications for the teaching and learning of mathematics in the college classroom. The author's contention that students do not like to think will be explored and attendees will participate in thinking activities to illustrate various points discussed in the book.

5:10 – 6:00
Cayuga **Project ERNIE participants**

Directors Room **Executive Board Meeting**

6:00 – 6:30 **Cocktail Half-Hour**
Steuben Bar

6:30 – 8:30 **Banquet**
Keuka & Seneca **Banquet Speaker — David Nicosia**
"Math: The Language of Meteorology"

8:30 – 11:00 **Music by The Destination** (http://www.thedestination.com/)
Keuka & Seneca **Stick around after the banquet for a little dancing**

Detailed Program: Sunday

7:00 – 7:50 **Breakfast**
Grille 1-2-5

8:00 – 8:50

Session 31 **A History of the Pythagorean Theorem**
Keuka

Presenter: Douglas R Furman, SUNY Ulster Community College

Presider: Hatesh Radia, Corning Community College

This talk will discuss almost 4000 years of history associated with the Pythagorean Theorem. We will begin in the Babylonian Period (c. 1800 BCE) and look at various proofs from Greek, Chinese, Hindu, European Renaissance and American cultures. We will also look at severeal results that extend and generalize this fundamental theorem.

Session 32 **How Can Exercise Change the Brain and Improve the Learning of Mathematics?**
Seneca

Presenter: Alexander Atwood, Suffolk County Community College

Presider: Bill Caroscio, Corning Community College

Recent research at the University of Illinois at Urbana-Champaign shows that cardiovascular exercise increases the volume of key regions of the human brain and improves cognitive performance of children. What are the possible mechanisms of this change in brain structure and cognition, and how can exercise be used to improve the way in which students learn mathematics?

9:00 – 9:50

Session 33 **Going in Circles**
Keuka

Presenter: Peter Stix, Hudson Valley Community College

Presider: Sue Kutryb, Hudson Valley Community College

What comes next in the sequence 1, 2, 4, 8, 16, ____ ? Come find out the surprising answer in a participatory session where we learn that the "obvious" answer isn't necessarily the answer.

The activity can be used in a very wide range of classes and curriculum levels, from elementary algebra to preCalc and beyond.

Session 34 **Testing for Divisibility Without a Calculator**
Seneca

Presenter: Donald Burd, Monroe College

Presider: Taoufik Ennoure, Monroe College

A survey of common and not so common methods and why they work.

10:00 – 10:50

Session 35 **Conversations with Herb**
Keuka

Presenter: Herb Gross, MIT, CCC & BHCC,
1st President of NYSMATYC

Presider: Ernie Danforth, Corning Community College

A time where people can come chat or ask questions etc.

Session 36 **EDA (EXPLORATORY DATA ANALYSIS)**
Seneca **The Best Way to be Successful on Statistical Projects**

Presenter: Eda Kuscakoglu, Nassau Community College

Presider: Ida Klikovac, Nassau Community College

Students and researchers are usually faced with a challenge when they have a statistical project or test they collect some data to analyze their projects but they can have hard time to realize which test they are going to use. They have a lot of questions like …"what do I do with all these numbers?", "What do they mean?" , " How do I start to make sense of them?" The first step is answering questions lies in Exploratory Data Analysis (EDA).

Exploratory Data Analysis (EDA) provides a simple and quick way to obtain a big picture look at the data. It helps to find mistakes using graphs…

Never, ever, run any statistical test without performing EDA first.
(microbiologybytes.com)