

31ST ANNUAL ORMATYC CONFERENCE

April 27 – 29, 2017



Inn At Spanish Head

RESORT HOTEL

LINCOLN CITY, OREGON



SCHEDULE

Thursday, April 27

5:30 – 7:00 PM

7:00 – 8:00 PM

8:00 – 11:00 PM

Registration {El Toro I}

Opening Keynote Speaker {El Toro}

MARK CLARK

Hosted Social {Suite 620}

CENGAGE LEARNING

PEARSON EDUCATION

Friday, April 28

7:30 – 8:45 AM

8:00 – 11:00 AM

8:45 – 11:45 AM

9:00 – 10:00 AM

10:00 – 10:30 AM

10:30 – 11:30 AM

Noon – 1:00 PM

1:00 – 4:00 PM

1:30 – 2:30 PM

3:00 – 4:00 PM

4:15 – 6:45 PM

Breakfast {Fathoms Restaurant}

Registration {El Toro I}

Exhibits {El Toro I}

SESSION I

Refreshment Break {El Toro I}

JOHN WILEY & SONS

SESSION II

Lunch {El Toro}

Exhibits {El Toro I}

SESSION III

SESSION IV

Hosted Social {Suite 620}

MCGRAW-HILL EDUCATION

Pearson Education, XYZ Textbooks

Cengage Learning, ORMATYC

Saturday, April 29

7:30 – 8:30 AM

8:00 – 8:45 AM

8:45 – 11:00 AM

9:00 – 10:00 AM

10:00 – 10:30 AM

10:30 – 11:30 AM

Noon – 1:00 PM

12:45 – 1:30 PM

Breakfast {El Toro}

ORMATYC Business Meeting {El Toro}

Exhibits {El Toro I}

SESSION V

Refreshment Break {El Toro I}

HAWKES LEARNING

SESSION VI

Lunch {El Toro}

Closing Keynote Speaker {El Toro}

GARY ROCKSWOLD

FEATURED SPEAKERS

OPENING SESSION KEYNOTE SPEAKER

Mark Clark; Palomar College

Math in the High Sierras

Thursday, April 27, 7 PM; El Toro

How a three-summer adventure hiking through the Sierras with my son influenced my approach to teaching Math.

Mark Clark graduated from California State University, Long Beach, with a Bachelor's and Master's in Mathematics in 1995. He is a full-time Associates Professor at Palomar College and has taught there since 1996. He is a member of AMATYC and regularly attends the national AMATYC conferences. Mark is also an author on three developmental math textbooks published by Cengage Learning. Through this work, he is committed to teaching his students through applications and using technology to help his students both understand the mathematics in context and communicate their results clearly.

CLOSING SESSION KEYNOTE SPEAKER

Gary Rockswold; Minnesota State University, Mankato (retired)

Mathematics, Science, and Reality

Saturday, April 29, 12:45 PM; El Toro

Does mathematics help shape "reality"? People not only live by the numbers, but are also fascinated by the strange worlds created by mathematics and science. Could reality even be a mathematical structure? This entertaining multimedia presentation discusses the profound, behind-the-scenes role that mathematics plays in both understanding and predicting reality, and highlights the importance of clearly communicating this role.

Gary Rockswold has taught mathematics, computer science, and physical science at a wide variety of levels, including high school, undergraduate, and graduate students for over 30 years. He received his bachelor's degree from St. Olaf College and his Ph.D. in applied mathematics from Iowa State University. He has been a principal investigator of parallel computing at the Minnesota Supercomputer Institute and is an emeritus professor of mathematics at Minnesota State University, Mankato. He is an author and has published numerous mathematics textbooks for Pearson Education at both the developmental and collegiate levels. His motivation for writing is to make mathematics more inclusive for a greater number of students by presenting mathematics in a contextual, meaningful way.

PRESENTATIONS

Session I: Friday, 9:00 – 10:00 AM

Ann Sitomer, ann.sitomer@gmail.com; Oregon State University

Kelly Mercer (Clackamas CC)

Building on Learners' Understanding: Ratios, Rates and Proportions

What do adult learners understand about ratio, rates and proportions prior to instruction? How can instructors use these ways of understanding as a resource for learning in the classroom? In this presentation, participants will explore these questions by examining learners' strategies on problems about ratio, rate and proportion; and by engaging in a discussion about how we can meet students in their current knowledge, build more meaningful understanding, and progress towards accepted disciplinary norms and shared understandings.

Room: Balboa (1st floor)

Mark Clark, mclark@palomar.edu; Palomar College

Fun Activities to Meet the Challenges of Beginning and Intermediate Algebra Students

Come and experience activities that you can use in your beginning and intermediate algebra courses to set the tone, deepen understanding of concepts, and connect skills with applications. Attendees will participate in the activities and receive access to templates of all activities presented.

Room: Cortez (1st floor)

Gary Parker, gparker@bmconline.com; Blue Mountain CC

Greg Schulberg (BMCC)

Exploring Fraction Addition Patterns with Number Theory

Gary Parker and Greg Schulberg will present a theorem on when the sum of two reduced fractions is reducible after applying the LCD algorithm. With the audience, we will explore interesting patterns and results using a bit of number theory and some online visualization tools we developed (<https://math.bluecc.edu/>). We will also explore applications to online homework systems, in particular, MyOpenMath.com. Please bring a laptop or tablet to play along.

Room: El Toro III (4th floor)

Jessica Bernards, jessica.bernards@pcc.edu; Portland CC

Wendy Fresh (PCC)

Office Mix – How to Create an Interactive Learning Experience

Make PowerPoint presentations come to life with Office Mix – a free add-in that turns presentations into interactive and engaging lessons. Includes features such as quizzes, polls, real-time digital inking, videos, embedded Geogebra applets, and live web pages.

Room: Suite 620 (6th floor)

Jessica Giglio, jgiglio@cocc.edu; Central Oregon CC

Kathy Smith (COCC)

College Math Courses in our High Schools: The Dual Credit Discussion Continues

This discussion group is a follow-up to last year's "College Math Courses in Our High Schools: A Discussion." Jessica and Kathy will give a quick update on how the dual credit alternate qualification program at COCC, Cascades Commitment, is progressing. Other attendees who are involved with dual credit programs will be invited to do the same. Then we'll discuss the pros and cons of our approaches and share ideas! Please attend if you have experience with dual credit programs (especially alternative qualification pathways), or are just interested in learning more about them.

Room: Suite 621 (6th floor)

NOTES

Session Title:

Speaker:

Contact Info:

Handouts:

PRESENTATIONS

Session II: Friday, 10:30 – 11:30 AM

Jeffrey Hayen, Jeffrey.Hayen@oit.edu; Oregon Institute of Technology

Practical and Efficient Evaluation of Inverse Functions

When inverse functions are first introduced in an intermediate or college algebra course, an emphasis is placed upon their properties but not upon how to practically evaluate them at arbitrary inputs in their domains. In fact, nearly all familiar inverse functions are evaluated by means of a calculator via certain optimized algorithms not disclosed to the user. This presentation will reveal an efficient method for the evaluation of inverse functions which is accessible to pre-calculus students. An opportunity for audience participation will be included to cultivate an appreciation for the simplicity of the method presented.

Room: Balboa (1st floor)

Toby Wagner, toby.wagner@chemeketa.edu; Chemeketa CC

Lisa Healey (Chemeketa CC)

From \$140 to \$28: Taking an 80% Bite out of Textbook Costs

In an effort to increase student accessibility by lowering costs, Chemeketa Community College has undertaken a textbook affordability initiative. Chemeketa Math Faculty have participated in this initiative by developing low-cost textbooks for Elementary Algebra and Intermediate Algebra classes. The faculty authors for these projects will share their experience producing the books as well as data/results from classes that have piloted the books. Course integration with MyOpenMath will also be discussed, and options for producing customized, low-cost textbooks will be explored.

Room: Cortez (1st floor)

Jim Fischer, Jim.Fischer@oit.edu; Oregon Institute of Technology

Ken Davis (OIT)

Mathematical Modeling for Applications in Natural Conservation

We will present ideas for mathematical modeling assignments/projects for students. By asking local professionals related to area environmental issues, we are developing several different projects which relate 100 and 200 level mathematics. This student engagement helps to answer the question, "What is this good for?" We also hope to teach our students that they can make a difference using their newly mastered mathematical skills.

As an example: It has been suggested that the gender of an American Avocet bird can be determined by computing the curvature of the bird's bill. Since it is desirable to count birds from a distance using photographs, we show several mathematical models to compute the curvature from a photograph.

Room: El Toro III (4th floor)

Kurt Lewandowski, kurtl@clackamas.edu; Clackamas CC

Something New for HS Skills Day

Like many of you, we at Clackamas Community College have been doing the same thing every year at our annual High School Skills contest day. Not only was it getting boring, but we felt that most students were not looking forward to coming to campus to take a math test. No, scratch that, take two math tests. They all sign up for an individual test, but then we offered a slightly different format for a team test, with declining participation.

We decided to mix things up and change the format of our team competition. Nothing radical, but it worked. Come find out what we used to do, and what we did this year. And share what you do with your skills team competition.

Room: Suite 620 (6th floor)

Dibyajyoti Deb, dibyajyoti.deb@oit.edu; Oregon Institute of Technology

Linear Algebra and Google's PageRank

We will look at an interesting application of linear algebra that I often talk about in my classes – the one used by Google in their PageRank algorithm.

Room: Suite 621 (6th floor)

NOTES

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Speaker:

Contact Info:

Handouts:

PRESENTATIONS

Session III: Friday, 1:30 – 2:30 PM

Dave Sobecki, davesobecki@gmail.com; Miami University – Hamilton

Tales From the Front Lines: One Guy's Thoughts on Teaching in a Collaborative Environment

As the non-STEM pathways movement has gained steam nationwide, an exciting new world of collaborative learning in the math classroom has opened. From math literacy at the dev level to QR and Statistical Literacy at the college level, discovery learning and productive struggle are threatening the dominance of traditional lecture, and it's about time! I've been deeply involved in this movement, and have many thoughts and stories to share from personal experience in the classroom, and from traveling all over these here United States working with and learning from college math instructors. I'd love to share them with you, and hear some of your stories from the front lines.

Room: Balboa (1st floor)

Mark Yannotta, marky@clackamas.edu; Clackamas CC

Rhonda Hull (Clackamas CC)

What are Oregon's Community Colleges Doing to Support STEM Students and What Roles can Math Faculty Play in those Endeavors?

Rhonda Hull and Mark Yannotta will facilitate a discussion that will explore both institutional and departmental support systems for STEM students at community colleges around the state. By sharing and discussing what is happening at various institutions, we hope to produce a best practices/institutional ideas document that could be shared with the ORMATYC community following the conference.

Room: Cortez (1st floor)

Bret Rickman, bret.rickman@pcc.edu; Portland CC

Simulation-Based Inference for Learning – Implementation in the Statistics Classroom

Dr. Allan Rossman's ORMATYC (2016) presentation led me to begin implementing Simulation-Based Inference for Learning in my college statistics classrooms. This presentation will be a reflection of my experiences over the past year with SBI as related to the "how" of implementation (successes and struggles) and feedback on the use of online simulation applets as an educational tool. The presentation will be held in a discussion format, with opportunity for questions and comments throughout our time together.

Room: Toro III (4th floor)

Jack Green, Jack.Green@mhcc.edu; Mt. Hood CC

Nickolas Chura (MHCC)

The Future of Online Textbooks

We present the beginnings of an OER Precalculus "book" utilizing interactive elements in the learning process, to make reading an active experience for students.

Room: Suite 620 (6th floor)

Mary Ann Kelso, mkelso@olympic.edu; Olympic College

Suzanne Stevenson (Computational ClassNotes)

Using Computational ClassNotes for the First Time in Hybrid Classes to Teach College Algebra

Suzanne will provide an overview of Computational ClassNotes (CCN). CCN deploys educational solutions to accredited colleges in the areas of analytical sciences and pre-med. CCN provides a fully integrated, end-to-end solution that enhances the learning, retention, and mastery of subject matter by students; reducing time spent by professors on mundane tasks and reducing or eliminating the need for students to purchase expensive and static textbooks.

Professor Kelso will share her experience deploying CCN technology in her math class at Olympic College. Professor Kelso invested time with CCN to design a customized curriculum providing the full spectrum of class materials – class/lecture notes, practice, homework, quiz and test modules along with quarter-end exams. All are fully integrated into the Learning Management System. Through the customization process, Professor Kelso introduced a hybrid class to her students – permitting her to work in a collaborative way with students – focusing during the class, on a one-to-one basis with those students who had specific questions – with successful results of increased learning and overall class grades.

Room: Suite 621 (6th floor)

NOTES

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Speaker:

Contact Info:

Handouts:

PRESENTATIONS

Session IV: Friday, 3:00 – 4:00 PM

Terry Krieger, takrieger@gmail.com; Rochester CTC

The Funny Thing about Math...

This entertaining presentation takes a look at mathematical oddities, curious results, and humorous anecdotes that have been collected from books, friends, and colleagues over the past 30 years. Math stories will be shared that are often amazing, sometimes confounding, and many times just plain ridiculous.

Room: Balboa (1st floor)

Carolyn Hamilton, Carolyn.Hamilton@uvu.edu; Utah Valley University

Start Small, Dream Big: Math Placement, Student Success, and Retention Research

Utah Valley University, a public, 4-year teaching institution with enrollment of more than 30,000, has faced math placement and retention challenges in the past. This session will share lessons learned during the two-year journey through a pilot of a new placement program, how to bring Academic Affairs and Student Affairs to the table (and keep them there), best practices, and the amazing successes that make it all worthwhile.

Room: Cortez (1st floor)

Kelly Mercer, kelly.mercer@clackamas.edu; Clackamas CC

Carrie Kyser (Clackamas CC)

Alternate Math Pathway OER Materials

In 2016, the presenters secured a grant from OpenOregon to create and share a set of materials for College Math Foundations (Math 098), the developmental course in the pathway for students needing Math in Society (Math 105) or Statistics I (Math 243) for their area of study. What emerged was a set of activities and teaching notes intended to supplant a textbook. Our materials focus on group dynamics, increasing student confidence and comfort in math class, and inviting students to explore the data that tell the story of our modern world, primarily through the lenses of climate science and social issues. We will share our materials as well as implementation exhibits – videos, student reactions, samples of student work, and instructor reflections.

Room: El Toro III (4th floor)

Ahmad Rajabzadeh, rajabzadeha@lanecc.edu; Lane CC

Maxwell's Demon and the Nature of Information

Can information be converted to energy? According to laws of physics you can't get energy for nothing. Worse still, you will always get less energy out of a system than you put into it (entropy law). Maxwell's demon is an imaginary creature that was the invention of mathematician and theoretical physicist James Clerk Maxwell, who wanted to contradict the entropy law. That is, the demon's only information about position and velocity of some particles will produce energy to do mechanical work. Now what is information? Information is simply "what you don't already know." If I tell you the Earth is round, you surely would not learn much; the message has low information content or low entropy. Compare that to me telling you that the price of gasoline will increase \$0.50/gallon tomorrow. The latter has high information entropy. In this talk I would like to discuss the nature of information, mathematics of a system's information content (information entropy H) and how it can help us produce threshold concept leading to some intrinsic motivation in classroom. I will do this through the exorcism of Maxwell's demon.

Room: Suite 620 (6th floor)

Commercial Presentation

Jennifer O'Brien, jobrien@hawkeslearning.com; Hawkes Learning

Web Accessibility, New Courses, and Custom Tools

Hawkes Learning will present new corequisite courses aligned with STEM and non-STEM pathways, the beta release of calculus software, an overview of web accessibility basics, and new features for course customization, including the latest innovation in question-authoring technologies: Question Builder. Win a \$25 Amazon gift card!

Room: Suite 621 (6th floor)

NOTES

Session Title:

Speaker:

Contact Info:

Handouts:

PRESENTATIONS

Session V: Saturday, 9:00 – 10:00 AM

Scott Peterson, speter@math.oregonstate.edu; Oregon State University

Katy Williams (OSU), Sara Clark (OSU)

College Algebra: Reshuffling the Content

The presentation will describe the processes and motivation for the drastic reordering of the College Algebra curriculum. The participants will also get to experience a small part of the course as if they are the students. Please bring a WiFi-enabled device (such as a phone or tablet) in order to experience this session in full.

Room: Balboa (1st floor)

David Hammond, david.hammond@oit.edu; Oregon Institute of Technology

Visualization of the Fractal Geometry of Julia Sets

Given a complex function $f(z)$, one can ask what happens when one iterates the function many times. The answer to this question involves the Julia set which, for many functions, consists of the set of points which do not converge either to infinity or to a fixed point of f . Julia sets are often fractals, showing stunning self-similar patterns for even very simple functions. These fractal images are a captivating example of beautiful patterns arising from very simple mathematical operations. In this talk I will give a tour of how Julia sets are defined, how they may be visualized and how some of their geometrical patterns may be explained. I will also explore the connection between the topology of Julia sets and the famous Mandelbrot set. Plenty of pretty pictures will be shown.

Room: Cortez (1st floor)

Ralf Youtz, ronald.youtz@pcc.edu; Portland CC

Emiliano Vega (PCC)

Primed to Help Students Succeed: Reflections on OER Adoption

You'll learn about one College's challenges and successes in finding, funding, piloting, and adopting Open Educational Resources (OER) for the statistics sequence. Learn how to leverage support for adopting OER from your college, from Oregon, and even from your students! Adopting OER is challenging, but it's worth it!

Room: El Toro III (4th floor)

Marge Burak, marge.burak@oregoncoastcc.org; Oregon Coast CC

Open Discussion on Placement

This is a session for sharing. For those of us who are still working on the placement process ... come and share what is working and what is not working. In particular, tools you are using for placement and all multiple measures.

Room: Suite 620 (6th floor)

NOTES

Session Title:

Speaker:

Contact Info:

Handouts:

PRESENTATIONS

Session VI: Saturday, 10:30 – 11:30 AM

David Liu, dliu@cooc.edu; Central Oregon CC

How to Work with Difficult Students

It is not easy to work with difficult students. In this presentation, we will talk about difficult students, difficult situations, and how to how to work with the difficult students and situations.

Room: Balboa (1st floor)

Joseph Reid, joseph.reid@oit.edu; Oregon Institute of Technology

Introduction to Bayesian Statistics

A brief review of Bayes Theorem and Likelihood will lead into a discussion of the Bayesian Statistical framework. We will consider prior and posterior distributions and how they affect the rules of decision making when it comes to applying statistical methods. This will be presented through a simple, coin flip example and demonstrate the differences and similarities between Bayesian, Frequentist, and Classical schools of thought in the calculation of probability and prediction.

Room: Cortez (1st floor)

Carrie Kyser, carriek@clackamas.edu; Clackamas CC

Kelly Mercer (Clackamas CC)

Alternate Pathway Implementation Discussion

Community colleges all over the country have embraced the idea of an “alternate pathway” for students to complete their college math coursework: A great idea whose time has come! The implementation has, however, presented its own set of challenges. This focus group – with facilitators, not presenters – will discuss enrollment issues, communication challenges, and clashes of culture. How healthy is your “alternate pathway”? Has anyone come up with a better name? How are you collaborating with various stakeholders on campus? Perhaps together, we can start to find solutions.

Room: El Toro III (4th floor)

Gary Parker, gparker@bmcconline.com; Blue Mountain CC

Open Education Resources Workshop

BMCC has been using OER (Open Education Resources) for many courses over the last few years. We plan to share resources we found like MyOpenMath.com, OpenStax.com, CK12.org and others. Please come and share free or open resources that you have found.

Room: Suite 620 (6th floor)

NOTES

Session Title:

Speaker:

Contact Info:

Handouts:

EXHIBITORS

{El Toro I}

CENGAGE LEARNING

Co-Sponsor

Thursday Evening Social

Contributor

Friday Afternoon Social

Alysun Burns

Aaron Zaltman

Eric Ziegler

COMPUTATIONAL CLASSNOTES

Mary Ann Kelso

Suzanne Stevenson

HAWKES LEARNING

Sponsor

Saturday Morning Refreshment Break

Jennifer O'Brien

Jennifer Vaughan

KNEWTON

Samantha Ventsam

MCGRAW-HILL EDUCATION

Sponsor

Friday Afternoon Social

Heidi Anderson

Colleen Lood

Sara Swangard

PEARSON EDUCATION

Co-Sponsor

Thursday Evening Social

Contributor

Friday Afternoon Social

Michelle Cook

Jennifer Gutierrez

TEXAS INSTRUMENTS

Brian Dunncliffe

JOHN WILEY & SONS

Sponsor

Friday Morning Refreshment Break

Sheila Ellis

John LaVacca

XYZ TEXTBOOKS (MATHTV.COM)

Contributor

Friday Afternoon Social

Rich Jones

ORMATYC

ORMATYC is a non-profit educational association.

ORMATYC has several purposes.

- To encourage the development of effective mathematical programs.
- To afford a state forum for exchange of ideas.
- To further develop and improve the mathematics education and the mathematics-related experience of students in two-year colleges.
- To promote the professional welfare and development of its members.
- To afford a forum for input at the state level concerning mathematics education.

ORMATYC Executive Board

President	Stefan Baratto, Clackamas CC
President Elect	David Favreault, Mt. Hood CC
Secretary	Frank Goulard, Portland CC
Treasurer	Lisa Folberg, Portland CC
Technology	Sean Rule, Central Oregon CC

Historians

Liz Coleman, Central Oregon CC
Becky Plassmann, Central Oregon CC
Donna J. (Raymond) Casey, Central Oregon CC

Conference Committee & Organization

Registration	Lisa Folberg, Portland CC
Program	Sean Rule, Central Oregon CC Stefan Baratto, Clackamas CC David Favreault, Mt. Hood CC
Technology	Sean Rule, Central Oregon CC
Exhibitors Liaison	Frank Goulard, Portland CC



CONFERENCES

Year(s)	Location
1987	Eugene
1988-1995	Newport
1996	Skamania Lodge; Stevenson, WA
1997	Salishan Lodge; Gleneden Beach
1998-2000	Inn at Spanish Head; Lincoln City
2001	Skamania Lodge; Stevenson, WA
2002-2005	Inn at Spanish Head; Lincoln City
2006	Skamania Lodge; Stevenson, WA
2007-2010	Inn at Spanish Head; Lincoln City
2011	Skamania Lodge; Stevenson, WA
2012-2015	Inn at Spanish Head; Lincoln City
2016	Salishan Spa & Golf Resort; Gleneden Beach
2017	Inn at Spanish Head; Lincoln City
April 26-28, 2018	Inn at Spanish Head; Lincoln City

PRESIDENTS

Year	President
1987-1988	Jim Streeter
1988-1989	Roger Judd
1989-1990	Mary Ellen White
1990-1991	Dorothy Beaufait
1991-1992	Dick Clark
1992-1993	Dick Holliday
1993-1994	Gary Grimes
1994-1995	Wally Waldman
1995-1996	Tom Reimer
1996-1997	Don Hutchison
1997-1998	Frank Goulard
1998-1999	Lynn Trimpe
1999	Marvin McCready
1999-2001	Doug Nelson
2001-2002	Dennis Kimzey
2002-2003	Renae Weber
2003-2005	Kurt Lewandowski
2005-2007	Ronda Kingstad
2007-2009	Pat Rhodes
2009-2011	Jerry Kissick
2011-2013	Charlie Naffziger
2013-2015	Jerry Kissick
2015-Present	Stefan Baratto

2017 ORMATYC CONFERENCE PROGRAM

Thursday	El Toro (4 th floor)			Suite 620 (6 th floor)	
5:30–7:00 PM	Registration				
7:00–8:00 PM	Opening Session Keynote Speaker <u><i>Math in the High Sierras</i></u> Mark Clark Palomar College				
8:00–11:00 PM	Hosted Social <i>Pearson Education</i> Michelle Cook, Jennifer Gutierrez <i>Cengage Learning</i> Alysun Burns, Aaron Zaltman, Eric Ziegler				
Friday					
7:30–8:45 AM	Breakfast Buffet – Fathoms Restaurant (10 th floor) Registration – El Toro I				
	Balboa (1 st floor)	Cortez (1 st floor)	El Toro III (4 th floor)	Suite 620 (6 th floor)	Suite 621 (6 th floor)
9:00–10:00 AM	<u><i>Building on Learners’ Understanding: Ratios, Rates and Proportions</i></u> Ann Sitomer Oregon State U Kelly Mercer Clackamas CC	<u><i>Fun Activities to Meet the Challenges of Beginning and Intermediate Algebra Students</i></u> Mark Clark Palomar College	<u><i>Exploring Fraction Addition Patterns with Number Theory</i></u> Gary Parker Greg Schulberg Blue Mountain CC	<u><i>Office Mix – How to Create an Interactive Learning Experience</i></u> Jessica Bernards Wendy Fresh Portland CC	<u><i>College Math Courses in our High Schools: The Dual Credit Discussion Continues</i></u> Jessica Giglio Kathy Smith Central Oregon CC
10:00–10:30 AM	Break – Hosted Refreshments Sponsored by John Wiley & Sons – El Toro I				
10:30–11:30 AM	<u><i>Practical and Efficient Evaluation of Inverse Functions</i></u> Jeffrey Hayen OIT	<u><i>From \$140 to \$28: Taking an 80% Bite out of Textbook Costs</i></u> Toby Wagner Lisa Healey Chemeketa CC	<u><i>Mathematical Modeling for Applications in Natural Conservation</i></u> Jim Fischer Ken Davis OIT	<u><i>Something New for HS Skills Day</i></u> Kurt Lewandowski Clackamas CC	<u><i>Linear Algebra and Google’s PageRank</i></u> Dibyajyoti Deb OIT
Noon–1:00 PM	Lunch Buffet – El Toro				
1:30–2:30 PM	<u><i>Tales From the Front Lines: One Guy’s Thoughts on Teaching in a Collaborative Environment</i></u> Dave Sobecki Miami U – Hamilton	<u><i>What are Oregon’s Community Colleges Doing to Support STEM Students and What Roles can Math Faculty Play in those Endeavors?</i></u> Mark Yannotta Rhonda Hull Clackamas CC	<u><i>Simulation-Based Inference for Learning – Implementation in the Statistics Classroom</i></u> Bret Rickman Portland CC	<u><i>The Future of Online Textbooks</i></u> Jack Green Nickolas Chura Mt Hood CC	<u><i>Using Computational ClassNotes for the First Time in Hybrid Classes to Teach College Algebra</i></u> Mary Ann Kelso Olympic College Suzanne Stevenson Computational ClassNotes
2:30–3:00 PM	Break				
3:00–4:00 PM	<u><i>The Funny Thing about Math...</i></u> Terry Krieger Rochester CTC	<u><i>Start Small, Dream Big: Math Placement, Student Success, and Retention Research</i></u> Carolyn Hamilton Utah Valley U	<u><i>Alternate Math Pathway OER Materials</i></u> Kelly Mercer Carrie Kyser Clackamas CC	<u><i>Maxwell’s Demon and the Nature of Information</i></u> Ahmad Rajabzadeh Lane CC	<u><i>Web Accessibility, New Courses, and Custom Tools</i></u> Jennifer O’Brien Hawkes Learning Commercial Presenter
4:15–6:45 PM				Hosted Social <i>McGraw-Hill Education</i> Heidi Anderson, Colleen Lood, Sara Swangard Contributors <i>Pearson Education</i> <i>XYZ Textbooks</i> <i>Cengage Learning</i> ORMATYC	

Saturday				
7:30–8:45 AM	Breakfast Buffet – El Toro (7:30 – 8:30 AM) ORMATYC General Business Meeting – El Toro (8:00- 8:45 AM)			
	Balboa (1st floor)	Cortez (1st floor)	El Toro III (4th floor)	Suite 620 (6th floor)
9:00–10:00 AM	<u>College Algebra: Reshuffling the Content</u> Scott Peterson Katy Williams Sara Clark Oregon State U	<u>Visualization of the Fractal Geometry of Julia Sets</u> David Hammond OIT	<u>Primed to Help Students Succeed: Reflections on OER Adoption</u> Ralf Youtz Emiliano Vega Portland CC	<u>Open Discussion on Placement</u> Marge Burak Oregon Coast CC
10:00–10:30 AM	Break – Hosted Refreshments Sponsored by Hawkes Learning Systems – El Toro I			
10:30–11:30 AM	<u>How to Work with Difficult Students</u> David Liu Central Oregon CC	<u>Introduction to Bayesian Statistics</u> Joseph Reid OIT	<u>Alternate Pathway Implementation Discussion</u> Carrie Kyser Kelly Mercer Clackamas CC	<u>Open Education Resources Workshop</u> Gary Parker Blue Mountain CC
	El Toro (4th floor)			
Noon–1:00 PM	Lunch Buffet			
12:45–1:30 PM	Closing Session Keynote Speaker <u>Mathematics, Science, and Reality</u> Gary Rockswold Minnesota State University, Mankato			

