



hawaii STEM conference 2012

PARTICIPATING SCHOOLS

Hawaii Island

Keaau High School
Kealahou High School

Kauai

Kauai High School

Oahu

Farrington High School
McKinley High School
Mililani High School
Roosevelt High School

Maui

Baldwin High School
Iao Intermediate School
Kamehameha Schools Maui
Kihei Charter High School
King Kekaulike High School
Lahaina Intermediate School
Lahainaluna High School
Lokelani Intermediate School
Maui High School
Maui Waena Intermediate School

Molokai

Molokai Middle School
Molokai High School



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PROGRAM

March 30 - 31
Wailea Beach
Marriott Resort & Spa

Presented by
Maui Economic Development Board, Inc.
Women in Technology Project

We are pleased to welcome you to the third annual Hawaii STEM Conference on the beautiful island of Maui.

You are joining STEM/Service Learning and Digital Media students, teachers, parents, community and business leaders from all over the state who have gathered here to celebrate their work over the past year, share best practices, and meet other STEM students from different islands.

This year, we are proud to feature our national Partners -- Google and National Geographic -- who along with our key Hawaii partners will be conducting stimulating hands-on sessions, as well as presenting the latest information on a wide range of engaging and informative STEM topics.

We urge you to take advantage of as many breakout sessions as possible. This is an amazing opportunity to discover what you are passionate about and what amazing STEM career paths are available to you.

Mahalo,
The Hawaii STEM Conference Team



John Allen III / *Chief Creative Officer*
Makaha Studios

As the Chief Creative Officer John oversees all production efforts and sets the creative standards for all client projects. A 1997 alumnus of Searider Productions, John has extensive experience in Hawaii's broadcast television industry. The former Creative Director at Honolulu Fox affiliate KHON2, John has won several Emmys for his work as a producer and videographer. In addition to his role at Makaha Studios, John closely works with Wai'anāe Coast youth as a video production instructor and technical advisor to Searider Productions.



Noelani Puniwai / *Scientific Liaison*
EPSCor, University of Hawaii at Hilo

Born and raised in rural Puna on Hawai'i Island, Noe has always felt connected to learning about and protecting our islands. Through a marine science lens, she has seen how mapping and GIS can both help us envision our world, and communicate our message. Noe is now a mother of 3 making her dedication to conservation and education of our youth a force in her life. Working at the University of Hawaii at Hilo for PIPES, the Pacific Islands Program for Exploring Science, she connects students to careers and research in Hawaii and empowers them to take control of our collective future. Noe is academically trained in marine (BA UH Hilo) and environmental science (MSc. WSU) and is working on her PhD in the Natural Resources and Environmental Management program at UH Manoa.



Leslie Wilcox / *Chief Executive Officer*
PBS Hawaii

Leslie Wilcox is a Hawaii public school graduate who serves as President and CEO of the state's only public television station, PBS Hawaii. A former print and broadcast journalist, Leslie covered news for the Honolulu Star-Bulletin, KGMB-9 News and KHON2. She also co-anchored the national PBS show, Asia Now. Her wide-ranging roles in the news business have included stints as a documentary producer, assistant news director, executive producer, and moderator of live televised mayoral and gubernatorial debates in the islands. She co-founded a charity program that became Hawaii's largest holiday drive and a year-round assistance agency. Still a consistently top-rated Hawaii news anchor after 25 years, Wilcox left commercial television for public media in 2007. Under her leadership, PBS Hawaii has expanded local programming, added curriculum-based children's shows, broadened international perspectives, and launched the nation's first statewide student news network, HIKI NŌ ("can do"), which is growing exponentially, with 73 public, private and charter schools participating at this time. This year, HIKI NŌ won the EDGE Award for innovation at the national public media summit in Washington DC and was recognized by the Hawaii State Senate for excellence in working with teachers to produce students with 21st- century skills.

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8:00 - 9:00 am	REGISTRATION	OUTSIDE AULANI FOYER	12:30 - 2:30 pm	BREAKOUT SESSIONS	
9:00 - 9:30 am	WELCOME and ALOHA	AULANI BALLROOM	12:30 - 2:30 pm	Google Earth	JADE
9:30 - 8:00 pm	3C's Advertising On-Site Competition	MAUNA LOA	12:30 - 2:30 pm	Books of the Future	PIKAKE II
9:30 - 11:30 am	BREAKOUT SESSIONS		12:30 - 2:30 pm	InDesign	PIKAKE I
9:30 - 10:30 am	Listen To Me! How To Get Your Ideas Heard & Understood	PUAKENIKENI	12:30 - 1:30 pm	Leadership Styles	PUAKENIKENI
9:30 - 10:30 am	National Geographic: Mission Explore	VANDA	1:30 - 2:30 pm	Kapiolani Community College STEM Program	ILIMA
9:30 - 11:30 am	Introduction to Game Design	PIKAKE II	12:30 - 2:30 pm	Pre-Engineering in 3D	PLUMERIA
9:30 - 11:30 am	Voyaging Through Time with Technology	ILIMA	12:30 - 2:30 pm	Apple Hawaii	VANDA
9:30 - 11:30 am	Google SketchUp	JADE	2:30 - 3:00 pm	Group Photo	Outside of JADE-PLUMERIA
9:30 - 11:30 am	Photoshop - Beginners	PIKAKE I	3:00 - 4:30 pm	Exhibit Booth Set	AULANI BALLROOM
10:00 - 11:30 am	STEMworks Teacher Meeting	AWAPUHI	4:30 - 5:30 pm	Teachers pick up hotel keys at registration/Luggage rooms opens	OUTSIDE AULANI FOYER
10:30 - 11:30 am	Body Lingo Bingo	PUAKENIKENI	6:00 - 7:45 pm	Dinner	AULANI BALLROOM
11:30 - 12:30 pm	LUNCH	AULANI BALLROOM		Keynote Speaker: Noelani Puniwai, EPSCoR	
	Guest Speaker: Bernadette Howard, Office of Career and Technical Education		8:00 - 10:00 pm	Star Party /Astronomy Session Institute for Astronomy	PACIFIC TERRACE ROOFTOP
			10:00 pm	CURFEW / students report to rooms	

7:30 - 8:30 am BREAKFAST AULANI BALLROOM

8:00 - 4:00 pm Teacher Professional Development Workshop
LOKELANI 1

8:30 - 10:30 am BREAKOUT SESSIONS

8:30 - 10:30 am Digital Storytelling JADE

8:30 - 10:30 am Pre-Engineering in 3D PLUMERIA

8:30 - 10:30 am Photoshop - Intermediate Advanced PIKAKE I

8:30 - 10:30 am Webdesign PIKAKE II

8:30 - 9:30 am Kapiolani Community College STEM Program ILIMA

8:30 - 10:30 am The Science of Space Monitoring VANDA

9:30 - 10:30 am Science of Agriculture PUAKENIKENI

10:30 - 11:30 am Social Media and You AULANI BALLROOM

11:30 - 12:30 pm LUNCH AULANI BALLROOM

Guest Speaker: Leslie Wilcox, PBS Hawaii

12:30 - 2:30 pm Program Impact Assessment (PIA) Presentations AULANI BALLROOM

12:30 - 2:30 pm BREAKOUT SESSIONS

12:30 - 2:30 pm Engineering Principles Using Kinect & Processing JADE

12:30 - 2:30 pm Books of the Future PIKAKE I

12:30 - 2:30 pm WordPress PIKAKE II

12:30 - 2:30 pm National Geographic Hawaii Meeting AWAPUHI

12:30 - 2:30 pm The Art of Film Making PUAKENIKENI

12:30 - 2:30 pm Voyaging Through Time with Technology IILIMA

12:30 - 2:30 pm Creative Innovations MAUNA LOA

2:30 - 3:30 pm Exhibits open to public AULANI BALLROOM

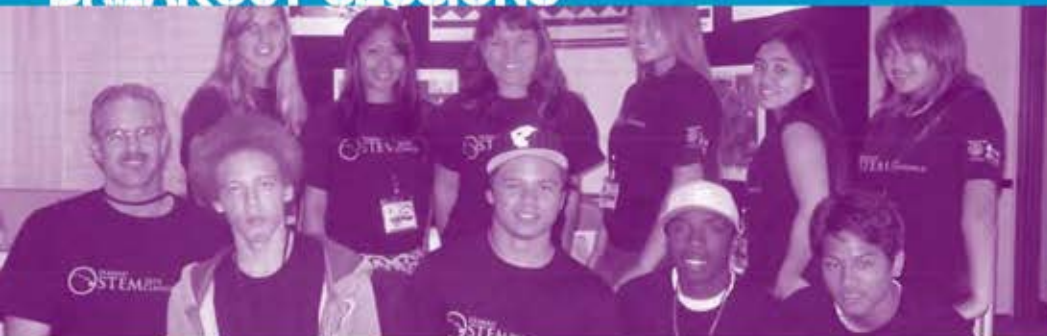
3:45 pm Exhibits Close/breakdown AULANI BALLROOM

6:00 - 8:30 pm AWARDS BANQUET AULANI BALLROOM

Keynote Speaker: John Allen III, Searider Production

8:45 pm MAUI SCHOOLS DEPART HOTEL FRONT ENTRANCE

10:00 pm CURFEW | students report to rooms



Google

Software Applications

We are excited to welcome the Google Team who will be presenting the following sessions:

Google SketchUp

Google SketchUp is a simple but powerful tool for exploring and presenting ideas in 3D. Sketchup allows students to start from scratch, or import drawings, CAD plans, photos, aerial imagery and other existing data into a project.

Google Earth

Discover the world through Google Earth.

- *Allyson McDuffie & Tina Ornduff*

National Geographic, Mission Explore

Software Applications

Engage in challenges with peers that involve a range of thought experiments, alternative explorations and creative thinking. National Geographic United Kingdom's, Daniel Raven-Ellison will take you on a journey via the National Geographic website to create your own missions that will collaborate between schools and islands. The winning team may be illustrated in the next National Geographic book!

- *Daniel Raven- Ellison, National Geographic*



Pre-Engineering In 3D

CAD

Discover Pre-Engineering and Design methods using 3D CAD. This hands-on session demonstrates how 3D technology makes engineering & design interactive, transforming ideas into prototypes and products.

- *Collin Kobayashi, 3D Academy*

The Science of Space Monitoring

Optics

This hands-on session will address the science related to telescope measurements. Students will learn about wave propagation, the electromagnetic spectrum, optics, and telescope control.

- *Air Force Research Laboratory*

Engineering Principles Using Kinect & Processing

Career/College Options

Find out about engineering principles and methods using Microsoft Kinect for Windows and MIT Media Lab's Processing software. This session will show you how Kinect technology and Processing software transform innovative ideas into interactive engineering and design prototypes and products. Dr. Debasis Bhattacharya of the UH-Maui College will be demonstrating software engineering principles.

- *Dr. Debasis Bhacharya, UH Maui College
Dr. John Helly, UC San Diego*

"STEMworks equipped me with tools I can't buy in a store, but the tools I can use in life."



KCC STEM Program

Come discover "Sea Perch" with the KCC STEM team. Sea Perch is an underwater remotely operated vehicle (ROV) project from the Massachusetts Institute of Technology (MIT) Sea Grant College Program. Students will learn to build and operate a miniature ROV, as well as discover how buoyancy, density, and other concepts impact its function.

● *Keolani Noa, KCC*

Career/College Options

Your Online Reputation in Today's Social World

The world is rapidly embracing social media and business practices are changing as a result, including how they screen candidates for job openings. Learn what social media is and how it's used by the global business community, and how your behavior online can affect whether or not you get the job you're looking for.

● *Peter Liu, Kaiscapes*

Social Media



Science of Agriculture

Learn about UH-Maui College's Agriculture and Natural Resources Program. The innovative New Farmers Network which is a project to assist students interested in starting their own farm business, or entering into an Ag industry after college. Session features hands-on Ag activities, new and existing agriculture programs in Tropical Crop Management, Horticulture and Landscape Maintenance, and Cultural & Natural Resource Management. Learn about student internships in Ag, and related initiatives to develop farmer mentors and help student/graduates who want to become "agriprenuers".

● *UHMC*

Career/College Options

InDesign

Explore the many facets of this core application for printing and layout design. The interactive sessions will introduce you to the basics of InDesign, how to apply those concepts to developing a newsletter and how to integrate the software with Photoshop.

● *Sara Asato,
Hawaii Creative Media*

Digital Media

"The Hawaii STEM conference was a turning point in my life -- now I'm excited and looking forward to my future."



Digital Storytelling

Storytelling has been around for thousands of years. Stories are used to entertain, inform, and inspire. In today's world, stories can now be told through high definition cameras, computer editing software, and stunning visual effects. Memorable stories have a strong structure and evoke emotion. Digital storytelling involves the use of digital images, audio, text, and narration in an attempt to involve viewers.

● *John Allen III*

Gaming/Animation

Photoshop - Beginners

This session will provide an exciting introduction to the design industry standard -- Adobe Photoshop. Topics to be covered: combining elements, layer styles, brushes, text tool, mask tool and many more tips and tricks. Students who want to get started in graphic design and web design are encouraged to sign up.

● *Sara Asato,
Hawaii Creative Media*

Digital Media

Photoshop - Intermediate/Advanced

Want to push your Photoshop skills to the next level but wondering how to do it? This intermediate session will build and expand upon a basic foundation in Photoshop technique. Previous Photoshop knowledge is highly recommended.

● *Sara Asato,
Hawaii Creative Media*

Digital Media



Webdesign

An overview of the ever expanding and changing world of web development, this informative workshop outlines the steps students can take to get their own custom, cutting-edge webpage up and running.

● *Nathalie Nunez*

Digital Media

WordPress

Come and join Nathalie Nunez as she helps you explore WordPress, one of the most popular content management and blog publishing applications available on the web today. With imagination and basic tools, this session will outline the steps student can take to launch their own WordPress.com blog.

● *Nathalie Nunez*

Digital Media

Books Of The Future

When music went digital, you could start making it in your bedroom and distributing it all over the world without needing a record company. When film went digital, the same thing happened and now YouTube spawns celebrities. The same thing has happened with books of all kinds: comics, novels, and magazines. It's about to happen again, this time with textbooks. This workshop will introduce you to Apple's "iBooks Author" program, which allows you to create digital books with text, images, video, sound, interactive graphics, and even built-in quizzes! Get a head start working with the new tools of digital education.

● *David Goldberg*

Software Applications



Voyaging Through Time with Technology

GIS/GPS

How well can you navigate? Would you have been one of the daring and resourceful Pacific Islanders who called Hawaii home? Come experience ancient and modern ways of navigation and how each is relevant for charting your future voyages. Be ready to explore your environment and apply knowledge gained using your senses, observational skills, and GPS units.

■ EPSCoR, UH Hilo

Where Are You Now?

GIS/GPS

A Geographic Information System or GIS has become a commonly used set of tools that can be applied in many exciting fields including natural resources, conservation, engineering, exploration and more. This session will cover GIS web applications and access to free data from the Internet. Learn about the tools that will help you manage your world and make it a better place. Explore the world and your community using GIS.

■ Alexis Dascoullas

"The highlight of my Hawaii STEM conference experience -- the Star Party! Wow! Looking through the telescopes was amazing -- seeing Saturn and the stars -- it was fascinating."



Introduction to Game Design

Gaming/Animation

Whether you're "hard core" and get into fights over the most powerful gaming platform, or simply love FarmVille, video games are the new Hollywood blockbusters. Explore basic elements that go into the development of all video games: story development, art direction, character design, animation, artificial intelligence, and programming logic. Using MIT's "Scratch," a simple but powerful visual programming tool, you will create basic video games. If you think you've got what it takes to make the next hit game -- whether it's a story, graphics, or a new mode of play -- then this workshop is for you.

■ Alexis Dascoullas

Creative Innovations

Engineering

The way things are invented is changing rapidly. Technology is now available to create innovative products on demand, locally, at low cost. Shared equipment workshops known as Makerspaces and FabLabs are popping up around the world, giving people access and training in this technology. Join the Maui Makers group as they help you explore various technologies from laser cutting and 3D printing to sewing electronics onto clothing.

■ Maui Makers



Listen to Me!

How to Get Your Ideas Heard & Understood

Learn the fundamental skills needed for public speaking that can help in all life situations. Presentations at school, competitions, job interviews, college interviews and networking will be more successful with sharpened public speaking skills. This interactive workshop will be informative and confidence building, whether you're in a small group or in front of hundreds of people. Learn how to get your ideas heard!

● *Alexis Dascoulias*

Leadership

Body Lingo Bingo

The most used forms of communication is not the spoken word, but our body language. Body Lingo Bingo will explore non-verbal communication including body posture, gestures, eye contact and facial expressions. Learn how to walk into a room with confidence and read other people's body language. Ever wonder what it means when someone scratches his ear or fidgets with her necklace? Find out at Body Lingo Bingo.

● *Alexis Dascoulias*

Leadership



Leadership Styles:

How to Identify Yours & Use Them to Your Advantage

Have you ever noticed that some group projects go well while others fall flat? Some teams or groups just click while others argue and fight? Learn how to identify your leadership style and the strengths and weaknesses of those around you. Are you an idea generator or an implementer? Explore the characteristics of 4 fundamental leadership styles and how to form the most dynamic group based on members' styles and ability to work together. This interactive workshop will have you talking about yourself and partnering with a surprisingly opposite leader!

● *Alexis Dascoulias*

Leadership

The Art of Film Making

Are you interested in working in the film industry? Join Local Filmmaker, Jess Cole as she explores the world of film making. Learn the core skills needed to be a Producer or a Production Professional. Filmmaker Jess Cole will discuss and show her work in Film, TV and Commercials here in Hawaii and abroad. Each student will have an opportunity to "pitch" and discuss ideas for their own projects.

● *Jess Cole*

Career/College Options



This year the Create, Communicate, Compete (3C's) Digital Media Advertising competition is honored to have partnered with the Hawaii STEM Conference to hold our 3rd annual 3C's competition. Hawaii Digital Media programs will be participating in creating a promotional package, clothing line, 30 second commercial, PowerPoint/Prezi, and a slogan. Participating students will have just one day to create and submit their work. The 3C's competition will be an amazing, fast paced, and innovative time!

Competition Agenda:

Friday:

8:15 am – 3C's Advertising Competition Briefing and Introduction of the Secret Topic

9:30 am – Plan/Storyboard (5 items – Promotional Package, Clothing Line, 30 second commercial, Powerpoint/Prezi, and Slogan)

11:30 – 12:30 – Lunch

12:30 – 5:45 – Competition Deadline

Saturday:

8:30 – 11:00 am – Student Presentations



Participating Schools

Baldwin High School
 King Kekaulike High School
 Lahaina Intermediate School
 Lahainaluna High School
 Maui High School
 Maui Waena Intermediate School
 Roosevelt High School

Agenda

7:30 am – 8:15 am Breakfast

8:00 am Registration

8:15 am Welcome, Isla Young

8:30 am - 10:00 am National Geographic (Citizen Science), Elena Takaki

10:00 am – 11:30 am Google (Sketch Up), Allyson McDuffie & Tina Ornduff

11:30 am- 12:15 pm LUNCH: Leslie Wilcox, PBS Hawaii

12:30 am - 1:30 pm National Geographic (MissionExplore.Net), Daniel Raven-Ellison

1:30 pm – 2:30 pm 3D Academy, (CAD), Collin Kobayashi

2:30 pm – 3:45 pm Google (Earth/Maps), Allyson McDuffie & Tina Ornduff

4:00 pm Closing

MARCH 31

SPECIAL CONFERENCE PRESENTERS





Download Knowledge. Upload Service.

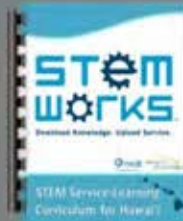
An innovative approach to STEM education

Unlike any other class in Hawaii's middle and high school curriculum, STEMworks is a multi-faceted, hands-on program where students get to use the most current, high-end technologies in actual service learning projects.

Becoming better thinkers

Students join a STEMworks Lab not only to learn the latest science, technology, engineering and math (STEM) technologies, they also get to work with local industry partners to apply their skills to specific issues, gaining the satisfaction of knowing their efforts are contributing toward improving life on their respective islands.

Once a STEMwork team identifies an existing problem/opportunity, each is tasked with creating a project design to customize and test their solution. During the process, they learn how to develop an industry partner relationship, provide an actual deliverable, and maintain an ongoing solution for the future.



Learning to Use Cool Tools

In tackling a range of challenges, STEMworks students have the chance to develop relevant 21st century skills in:

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> ■ Animation ■ Computer-aided design (CAD) ■ Engineering design ■ Visualization ■ Database design | | <ul style="list-style-type: none"> ■ Webpage design ■ Programming ■ Office automation ■ Global Positioning Systems (GPS) ■ Geographic Information Systems (GIS) |
|--|--|--|



MEMBER OF
MAUI
HIGH
SCHOOL
STEMWORKS

Zachariah Aubut

ZACHARY'S
DREAM -
FOUNDATION
FOR YOUTH IN
TECHNOLOGY



“Through perseverance and never giving up on dreams I was able to find my “true calling” as some would say, and create 3D models of my unimaginable imagination”

Zachary's Dream - Foundation for Youth in Technology has been created by his family in remembrance of Zach. The foundation will be donating funds to Maui High School — CTE Industrial and Engineering Technology Program to help young enthusiasts achieve education in Technology. In addition, we will be giving scholarships to students for computers, books, or money for education. Also, we would like to create a Community Awareness Program for kids.

www.zachariahaubutfoundation.org

County of Maui • Office of the State Director for Career and Technical Education
 US Department of Labor Air Force Research Laboratory (AFRL) • US Department of Agriculture
 Hawaii Department of Education • US Department of Education • National Geographic Hawaii Alliance
 The Honorable Senator Dan Inouye • The Honorable Mayor Alan Arakawa • The Honorable Mazie Hirono

John Allen III
 J.D. Armstrong
 Sam Aruch
 Rondy Arquero
 Sara Asato
 Debasis Bhattacharya
 Tye Burgess
 Mary Cajski
 Koa Chang
 Clifton Ching
 Jess Cole
 Dean Peter Crouch
 Alexis Dascoulias
 Kimberly Dovre
 Daniel Raven-Ellison
 Ann Emmsley
 Lynn Flaming
 Goodfellow Bros., Inc

McClyde Gaborno
 Clint Gima
 David Goldberg
 Leilani Green
 Steve Griffin
 Mike and Bonny Herbert
 Luane Higuchi
 Bernadette Howard
 Mark Hymas
 Jerry Isdale
 Royce Jones
 Kepano Kekuewa
 Miki Kamimura
 Mike Kern
 Brian Kohne
 Collin Kobayashi
 Cindy Krach
 Peter Liu
 Tiare Martin
 Kevin Matsunaga
 Allyson McDuffie
 Steve McGee
 Dina Mezheritsky
 Jeff Moniz
 Keolani Noa
 Cynthia Nazario-Leary
 Nathalie Nunez
 Tina Ornduff

Noelani Puniwai
 Teena Rasmussen
 Rob Ratkowski
 Jan Roberson
 Amy Rosen
 Tasha Kawamata Ryan
 Ryan Saito
 Emily Schell
 Candy Suiso
 Rebecca Sydney
 Elena Takata
 Karen Volarich
 Leslie Wilcox
 Stacie Williams
 Donn Yamamoto
 3D Academy
 Ali'i Kula Lavender Maui
 Apple
 Ardent Management
 Consulting
 Boeing Company
 Camp Center Stage
 ESRI
 EPSCoR Hawai'i
 Gilbert and Associates
 Google

Institute for Astronomy
 Kaiscapes
 Kapi'olani Community College
 Malama Pono Productions
 Maui High Performance
 Computing Center
 Maui Makers
 Oceanit
 Office of Economic Development
 ONR MIDPAC Office
 PBS Hawai'i
 Searider Productions
 Total Network Solutions, LLC
 UH Mānoa College of Education
 UH Mānoa College of
 Engineering
 UHMC Department of Agriculture
 University of Hawai'i at Hilo
 University of Hawai'i at Mānoa
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