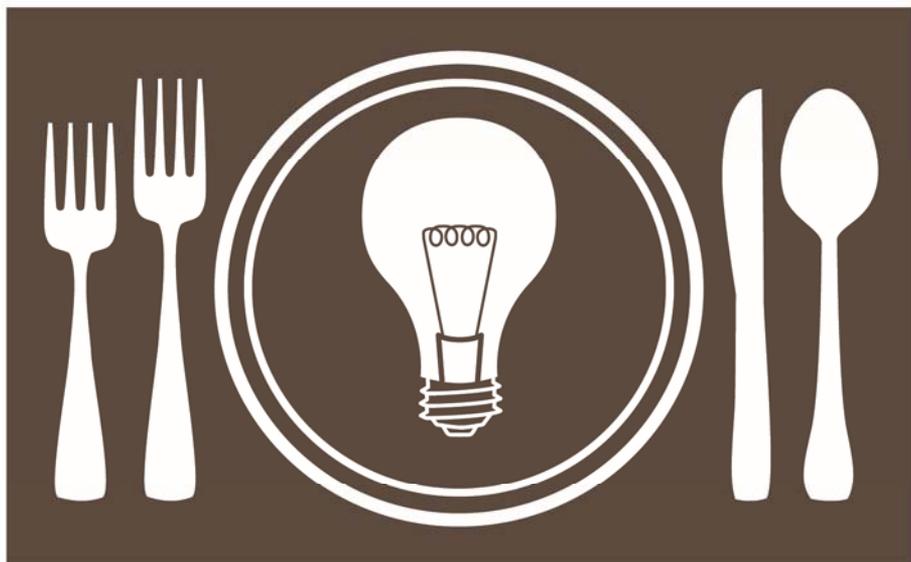


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Oakland Unified School District



**DINNER** with  
a **SCIENTIST**

May 27, 2014, 5-8 pm

Welcome to Oakland Unified School District's sixth annual Dinner with a Scientist! We are proud to collaborate with Chevron Corporation, Oakland Zoo, and many other science organizations in the Bay Area to offer an evening of science exploration and conversation. Science teaching and learning occurs daily in our schools, but seldom do we have the opportunity to connect scientific concepts with the real work of scientists. Tonight is that rare opportunity to converge education with the local scientific community.

I want to especially thank all the scientists, volunteers, and teachers who made this event possible. The field of science is ever changing as evidenced by the diverse group of scientists in attendance. Whether you are a student interested in science, a science teacher, or a scientist working to improve our understanding of the world around us, my hope is that you broaden your perspective through this evening's activities.

Caleb Cheung  
*Science Manager, OUSD*

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On behalf of the Oakland Zoo, we would like to thank the Oakland Unified School district for organizing this inspiring, exciting event. We are honored to be a part of an evening that brings together teachers, students, and scientists who are interested and energized about science. Among us are current and future leaders of the scientific community. Also among us are the tireless, extraordinary mentors, the ones that have brought all of us to where we are now - teachers.

Whether you are aspiring to become a biologist, chemist, veterinarian, green engineer, or simply a nature lover, we invite you to explore the Oakland Zoo and be inspired by our animals, research, programs, and plans for the future. We hope this evening will help fuel new ideas for learning and bring about career opportunities that many youth have never explored or thought about. Thank you for being passionate about science and have a wonderful evening.

Dr. Joel Parrott  
*Executive Director, Oakland Zoo*

## Program

- 2:00 Visit Zoo (optional)
- 5:00 Registration & Live Animal Encounters
- 5:25 Welcome & Ice Breaker  
*Caleb Cheung*  
*Science Manager, OUSD*  
*Gary Yee*  
*Superintendent, OUSD*  
*Melinda Sievert*  
*Teen Programs Manager, Oakland Zoo*
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote  
*Maynard Holliday, Robotics Engineer*  
*Sandia National Laboratories*
- 6:45 Dinner & Conversation with Scientist #2
- 7:15 Raffle
- 7:20 Dessert & Conversation with Scientist #3
- 7:50 Appreciations and Conclusion
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## Menu

Random Leaves and Solutions  
Wheat, Yeast, and Garlic Mixture  
Extract of Newton's Favorite Fruit  
Dihydrogen Monoxide in Two States with Citrus Accents  
Sodium Chloride & Piper nigrum  
Steamed Random Plant Parts  
Grass Seeds and Random Plant Parts  
Grilled Poultry with Fungus and Roots  
Herbivore Option: Plant Pasta with Marinara Sauce  
Heat-Treated Cacao Carbohydrate Solids with Ripened Plant Ovaries  
Wrapped Cacao with Metha or Rubus

## Scientist Biographies

### Maynard Holliday

Keynote

Robotics Engineer,  
Sandia National Laboratories

[mhollid@sandia.gov](mailto:mhollid@sandia.gov)

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I am a senior engineering and robotics professional. Using my knowledge of robotics and intelligent machine systems, I have published and presented my work internationally over the past 25 years. In addition, I won a scholarship to Stanford University and to the International Space University in France!

### Ashley Gibb

Tables 11, 12, 10

Graduate Student, UC Berkeley

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I'm a graduate student researcher at UC Berkeley. I studied chemistry in college, then spent a year living and teaching in Indonesia. Now I work to solve problems in physics, chemistry, and materials science. My research involves making and studying new nanomaterials. This means that I get to work with really small things. Occasionally, I get to use an awesome microscope that can see atoms! I went into science because I love learning about the world!

### Chrissy Rivera

Tables 1, 2, 3

Graduate Student Researcher,  
UC Berkeley

[crivera@berkeley.edu](mailto:crivera@berkeley.edu)

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Why do dogs love chasing balls? Why do birds sing? Why does my cat sleep all day? Animals and their unique behaviors have always fascinated me. I am a graduate student studying behavioral ecology, and I study how and why animals do what they do. In particular, I work with tiny jumping spiders, and have learned some very cool things about their behavior that I would love to share with you!

### Claire Thomas

Tables 6, 4, 5

Graduate Student Researcher,  
UC Berkeley

[cthomas2416@gmail.com](mailto:cthomas2416@gmail.com)

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I grew up in Louisiana and first became interested in science while daydreaming about the big bang theory during class. Now, I am a graduate student in physics at UC Berkeley. To me, science is about continuing to ask questions no matter how much we think we understand. That's why I study atoms, which work together to make up everything around us. Even though they're everywhere, much about how atoms work together is still a mystery. In order to take a good look at the atoms, I get to use lasers, some of which I make myself.

**Cynthia Cudaback**

Student Teacher, Mills College

Tables 20, 21, 22

cynthia.cudaback@gmail.com

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When I was just 6 or 7 years old, my father used a blowtorch to show me why blue stars are hotter than red stars. I have spent my life since then (40 years!) learning and teaching science. I got a physics degree at UC Berkeley, then sailed around the world as an officer on a research ship. Eventually, I returned to school at the University of Washington, where I met my husband, became a storyteller and got a PhD in geophysics. I like to combine my passions for science, education and storytelling.

**Danny Hellebusch**Graduate Student Researcher,  
UC Berkeley

Tables 8, 9, 7

djhellebusch@gmail.com

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As a child, my parents would take my family on long camping trips all across the US which exposed me to the awe-inspiring natural world. In high school I discovered the excitement of applying math to chemistry and physics problems which led me to pursue chemical engineering in college. Throughout high school and college, I realized that climate change is threatening the preservation of our natural world which inspired me to pursue my PhD in applied science for clean technology. Currently, I study materials for solar cells.

**Frederick Moore**MESA Director,  
City College of San Francisco

Tables 4, 5, 6

fmoore@bdis.us

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My science background is in human genetics. I studied and discovered genes that play a role in infertility in humans. What fascinated me about science was developing the ability to understand the rules of how mother nature works, and then breaking those rules to help mankind. I attended Solano Community College, UC Berkeley and UC San Francisco, for my academic and scientific training.

**Heather DePaul**

Associate Scientist, Amyris, Inc.

Tables 7, 8, 9

depaul@amyris.com

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I am an associate scientist at Amyris Biotechnologies where we use synthetic biology to make renewable products. I earned a Bachelor of Science degree in Biology with a minor in Chemistry from Sonoma State University. I have been in love with science from a young age. Science is so intriguing to me because it is all around us, and there is always something new to discover!

**Jeffery Seitz**

Tables 9, 7, 8

Professor,

California State University East Bay

[jeff.seitz@csueastbay.edu](mailto:jeff.seitz@csueastbay.edu)

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I am a professor of Earth and Environmental Sciences and my specialty is in geochemistry (that's the chemistry of the Earth). Currently, my research focuses on the chemistry of the origin of life on Earth and in the Solar System. I became a geologist because of my love for our planet. I think that I have the best job because I get to study interesting problems with my students and teach others about our planet.

**James Valenti-Jordan**

Tables 3, 1, 2

Project Engineer,

Del Monte Foods, Inc.

[james.valenti-jordan@delmonte.com](mailto:james.valenti-jordan@delmonte.com)

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I went into engineering to figure out tough logic problems using science. I chose the food industry because it is something real that you can touch, and when you are done with your experiments, you can eat them! I work on all sorts of projects from solar panels to soup, so it is something new every day. Before Del Monte, I worked for Campbell Soup, General Mills, and Pillsbury.

**Janice Kolberg**

Tables 5, 6, 4

Vice President (former)

Diabetes Research

[janicekolberg@comcast.net](mailto:janicekolberg@comcast.net)

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I have recently retired after more than 25 years of working in medical diagnostics. I led a research group with responsibility for the development of assays for measuring the amount of HCV and HIV in blood and other agents of infectious disease. More recently I worked on the development of tests to assess the risk of developing diabetes. I received my BS and PhD in Biochemistry. I was not particularly interested in science until my senior year in high school when I had a teacher who made chemistry interesting because he made us learn by doing laboratory work rather than just memorization.

**Jennifer Weaver**

Post-Doctoral Scholar, UC Berkeley

Tables 10, 11, 12

[jennweaver@berkeley.edu](mailto:jennweaver@berkeley.edu)

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I am a post-doctoral scholar at UC Berkeley, where I build ecological models of species' distributions. I received my PhD from the University of Toronto in 2012. I grew up playing outdoors and was very curious about our environment, especially rivers, forests and animals. I chose a career that would allow me to continue to play outdoors and explore scientific questions about animals and their habitats (although now my questions are a little more complex!).

**Jillian Denton**

Scientist I, The Clorox Company

Tables 17, 18, 16

[jillian.denton@clorox.com](mailto:jillian.denton@clorox.com)

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I've worked as a process developer at Clorox for almost 2 years. I started out working on making Hidden Valley Ranch and KC Masterpiece products taste even better, and now I'm working in our cat litter business. I majored in Chemical Engineering in college because I love chemistry and I was also pretty good at math. I've always liked puzzles, and engineering is all about solving puzzles.

**Jonathan Weisman**

Scientist, The Clorox Company

Tables 14, 15, 13

[jonathan.weisman@clorox.com](mailto:jonathan.weisman@clorox.com)

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I am a Chemical Engineer at the Clorox Company. I decided that science was perfect for me because I loved to figure out why things work when I was younger. I also liked to build things and learn about structures such as bridges and skyscrapers. In school, I actually math and science wasn't always easy, but it was worth the struggle.

**Leeann Louis**

Graduate Student, UC Berkeley

Tables 13, 14, 15

[llouis@berkeley.edu](mailto:llouis@berkeley.edu)

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I love animal anatomy and enjoy learning how animals function and move around. After graduating with a degree as a biological engineer, I worked in rainforests, hospitals, and nature centers to study how people and animals move. I then make devices and drugs that can help those that are injured. Now I'm a biology graduate student at UC Berkeley, where I study bird flight. I love using science to understand and improve our world!

**Leslie Storer**

Senior Keeper, Oakland Zoo

Tables 16, 17, 18

lstorer@oaklandzoo.org

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I am a zookeeper at the Oakland Zoo. As a junior volunteer at the San Francisco Zoo, I realized that I enjoyed caring for animals and sharing my enthusiasm with others. I have a degree in zoology, and I have worked with a wide variety of amphibians, reptiles, mammals, and birds. In addition to feeding and cleaning up after animals, which requires knowledge of biology, I also train them, which involves knowledge of psychology, to perform behaviors that allow us to take better care of the animals and keep them mentally and physically active.

**Michelle Moy**

Food Technologist III,

Del Monte Foods, Inc.

Tables 12, 10, 11

michelle.moy@delmonte.com

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I am a food scientist working at Del Monte Foods, Inc. in Vegetable Research and Development creating new products. I received a Bachelor's Degree in Food Science from the University of Illinois at Urbana-Champaign. Food science combines my interest in cooking and chemistry. Understanding the science behind food products makes walking through the grocery store an adventure.

**Mireille Kamariza**

Graduate Student, UC Berkeley

Tables 2, 3, 1

mkamariza@berkeley.edu

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Since I was little, I have always been fascinated by the way really small things like atoms in proteins and DNA work together to form living things like plants and people. That is why I decided to major in Biochemistry, a combination of biology and chemistry, during my undergraduate years at UC San Diego. I am now a PhD student at UC Berkeley studying how a small bug infects people and makes them sick.

**Misha Leong**

Graduate Student Researcher,

UC Berkeley

Tables 22, 19, 20

mishaleong@berkeley.edu

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As an insect ecologist, I get to ask a lot of questions about insects and how they adjust to life in a changing world. I've always been fascinated by insects and spiders. Despite being all around us, they are easily overlooked animals that play critical roles in the functioning of ecosystems. I am currently at UC Berkeley, wrapping up a project on California bees.

**Nelson Coates**

Postdoctoral Fellow, UC Berkeley

Tables 15, 13, 14

[necoates@lbl.gov](mailto:necoates@lbl.gov)

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From galactic superclusters, to subatomic particles, I love asking questions and learning about how the universe works. However, many questions about the way things work don't have answers. I became a scientist because the scientific method is a powerful way to advance our knowledge and find answers for those questions. I received my PhD in Physics from the University of California, Santa Barbara where I studied next-generation solar cells. Now, I work at UC Berkeley, where I study ways to turn heat into electricity.

**Rachel Pepper**

Postdoctoral Fellow, UC Berkeley

Tables 18, 16, 17

[rachel.pepper@berkeley.edu](mailto:rachel.pepper@berkeley.edu)

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I am a physicist at UC Berkeley, and I study how fluids (like water) move. In the past I've studied splashing, similar to what happens when a rain drop hits the ground. Now I study how tiny organisms move the water around them to get enough to eat. I got my Ph.D. at Harvard, and worked for two years at the University of Colorado studying how people learn physics before I moved to Berkeley. I decided to go in to physics because I like to understand how things work.

**Tara Burkhart-Grove**Senior Associate Scientist,  
Amyris, Inc.

Tables 21, 22, 19

[taragreentree@yahoo.com](mailto:taragreentree@yahoo.com)

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I graduated from UC Davis with a BS in Environmental Toxicology. My first job was working at an environmental testing laboratory that tested ground water, drinking water and soil contamination from building sites, schools and parks in a rural community. Results from our testing were used in a law suit to prove that a big power company polluted, making lots of people sick. Now, I work for a company that engineers yeast to make more sustainable products from sugar instead of from animals or plants. I develop analytical methods on intricate machines to test the purity of our products. I particularly like how science can make our world healthier and more sustainable.

**William Thur**

Tables 19, 20, 21

Mechanical Engineer,  
Lawrence Berkeley National Laboratory

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I am a mechanical engineer at Lawrence Berkeley National Laboratory. I've worked in several fields, but my main career has been helping the scientists at Lawrence Berkeley Laboratory to do their experiments successfully and safely. I like to solve problems and make things work. Designing, building, and fixing machines and systems are what I like best. Scientists and engineers are people who really know how the world works, and they will be even more important in the future.



## **Participating Schools**

*Burckhalter Elementary, Chabot Elementary,  
Cleveland Elementary, Crocker Highlands Elementary,  
Emerson Elementary, Hoover Elementary, Joaquin Miller Elementary,  
Kaiser Elementary, Lafayette Elementary, Lincoln Elementary,  
Martin Luther King Jr. Elementary, Montclair Elementary,  
Piedmont Avenue Elementary, PLACE @ Prescott, Sankofa Elementary,  
Sequoia Elementary, Thornhill Elementary,*

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## **Acknowledgements**

### Oakland Zoo

*Bo De Long-Cotty, Melinda Sievert, and the Education Department  
(Facilities, Donations, Planning, & Activities)*

### Volunteer Scientists

*Maynard Holliday*

*Ashley Gibb, Chrissy Rivera, Claire Thomas, Cynthia Cudaback,  
Danny Hellebusch, Frederick Moore, Heather DePaul, James Valenti-Jordan,  
Janice Kolberg, Jeffery Seitz, Jennifer Weaver, Jillian Denton, Jonathan  
Weisman, Leeann Louis, Leslie Storer, Michelle Moy, Mireille Kamariza, Misha  
Leong, Nelson Coates, Rachel Pepper,  
Tara Burkhart-Grove, William Thur*

### Oakland Unified School District

*Gary Yee*

*Caleb Cheung, Christine Chen, Claudio Vargas,  
David Avery, Julia Feldman, LaTanya Smith, Laura Prival,  
Liz Martin, Liz Woodward, Marilu Boytes, Ricky Logan,  
Sara Rusche, Sonnie Dae, Tasha Russell*

### Other

*Teresa Barnett & Sandra Lee-Takei, Community Resources for Science (Setup)  
Howard Ruffner (Photography)  
Espresso Gourmet (Catering)*

Photos from tonight's event are available at  
<http://science.ousd.k12.ca.us>