
Oakland Unified School District



DINNER with
a **SCIENTIST**

May 30, 2012, 5-8 pm

Welcome to Oakland Unified School District's fourth annual Dinner with a Scientist! We are proud to collaborate with Chevron Corporation, Oakland Zoo, S. D. Bechtel, Jr. Foundation, 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

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 Seating (*table # on name tags*)
- Welcome & Ice Breaker
Caleb Cheung, Science Manager, OUSD
- Welcome
Tony Smith, Superintendent, OUSD
Dr. Joel Parrott, Executive Director, Oakland Zoo
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote
Margaret Rousser, Zoological Manager, Oakland Zoo
- 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: Fried *Cicer arietinum* balls with *Triticum durum* salad
with chopped *Mentha*, *Allium*, and seasonings
Heat-Treated Cacao Carbohydrate Solids with Ripened Plant Ovaries

Scientist Biographies

Margaret Rousser

Zoological Manager, Oakland Zoo

Keynote

margaret@oaklandzoo.org

I am passionate about both animal behavior and conservation. My current focus at the Oakland Zoo is divided between using operant conditioning to manage and improve zoo animal welfare and the conservation of California's only native aquatic turtle, the Western Pond Turtle. I earned a bachelor's degree from University of California, Santa Barbara in Anthropology as well as a degree in Wildlife Management from Moorpark College. My diverse career in animal care and management has included dolphin training and assisted reproduction in baboons.

Abby Knight

Graduate Student, UC Berkeley

Table 8, 9, 7

aknight@berkeley.edu

I am a graduate student at UC Berkeley studying chemistry. Specifically, I am developing materials for water remediation. Ever since I was little I've been fascinated by science. I attended college at the University of North Carolina. There, I realized that what is important to me is working on things that are both interesting and have the potential to help people.

Alan Poon

Staff Scientist, Lawrence Berkeley National Laboratory

Table 12, 10, 11

awpoon@lbl.gov

I have been a physicist at Lawrence Berkeley National Lab since 1998. My research focuses on a tiny subatomic particle called neutrinos. I have performed experiments in various countries, including Canada, Germany, Japan, and the US. I chose a career in physics because of the influence of a few great mentors I had when I was a student in Canada.

Ashley Gibb

Graduate Student Researcher, UC Berkeley

Table 5, 6, 4

ashleygibb@berkeley.edu

I am a graduate student researcher at UC Berkeley working on designing new nanomaterials which are very, very small particles. I studied chemistry in college, but now work on problems in physics, chemistry and materials science. Occasionally, I get to see atoms! In between college and graduate school I spent a year living and teaching in Indonesia. While there I was able to travel around the country and experience many different cultures, languages and environments!

Christoph Maurath

Scientist, Livermore Software Technology Corporation

Table 15, 13, 14

chris@lstc.com

I am a scientist at Livermore Software Technology Corporation where I create virtual finite element models of crash test dummies which our customers use to design safer cars. As a kid I was always interested in how things worked and took many of my toys apart to see how everything looked inside. Most of the time I could put them back together again. My biggest inspiration to pursue science and technology was my dad who is also an engineer. Now, I have a Doctor of Science in Transportation Safety Engineering.

David Cole

Group Manager, The Clorox Company

Table 14, 15, 13

david.cole@clorox.com

I am a Group Manager at the Clorox company where I manage a team of scientists in the development of cleaning products such as Pine-Sol, F409, Tilex, and Green Works. I originally went into science because of my life long interest in nature and desire to understand "how things work." I've had the good fortune to have a rewarding and diverse career that has taken me all over the world and learn a great deal along the way. I couldn't encourage you more to select a career in the sciences.

Dennis Evangelista

Graduate student / PhD Candidate,

UC Berkeley, Integrative Biology

Table 10, 11, 12

devangel@berkeley.edu

I am a graduate student in integrative biology at UC Berkeley studying flight biomechanics. Biology is loads of fun, providing time with strange creatures and plants. I have even spent time on the ice in Antarctica. Before studying biology, I studied and work in other science fields including mechanical engineering, electrical engineering, and working as a nuclear engineer in the US Navy. I went into engineering because he wanted to know how stuff works. My interest in biology grew from engineering techniques that can be used to understand how organisms work.

Desiré Whitmore

Postdoctoral Researcher, UC Berkeley

Table 6, 4, 5

laserchick@berkeley.edu

I am a laser scientist at UC Berkeley studying the chemistry and physics of light interacting with matter. Growing up, I was always curious about how and why things work the way they do, and because I was good at math and chemistry, I studied Chemical Engineering at UCLA. After graduation, I decided to focus more on science than engineering and went to UC Irvine to get my PhD in Chemical and Material Physics.

Ina Reichel

Table 18, 16, 17

Senior Scientific Engineering Associate,
Lawrence Berkeley National Laboratory

IReichel@lbl.gov

I'm a physicist from Germany. I specialize in particle accelerators. Those are large machines that are used for a variety research projects with particles smaller than an atom. They are really fascinating and I get to work with scientists from all over the world.

James Frank

Table 13, 14, 15

Supervising Naturalist, East Bay Regional Park District *jfrank@ebparks.org*

I am a naturalist for East Bay Regional Park District. I grew up near the ocean and spent much of my time around water. After swimming lessons at the beach, I would grab some friends and a net to find and learn about the animals that lived in the wetlands nearby. Now I explore and teach about aquatic ecosystems with my giant fish tank on wheels, which I take to schools throughout the East Bay.

Jamie Valenti-Jordan

Table 17, 18, 16

Project Engineer, Del Monte Foods *james.valenti-jordan@delmonte.com*

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.

Janiece Hope

Table 26, 27, 25

Senior Scientist, The Clorox Company *janiece.hope@clorox.com*

I am a Scientist at the Clorox company. My PhD is in analytical chemistry and my current job is to work on making sure our products work well for our customers. I have always enjoyed science experiments. When I was young, I watered my younger brother to make him grow and I also tested the hardness of his head by breaking my hairbrush over his head. In high school, I knew I wanted to study science for my career.

Jill Fuss

Research Scientist, LBNL

Table 2, 3, 1

jfuss@lbl.gov

I am a Research Scientist in biophysics and biochemistry at Lawrence Berkeley National Laboratory. I study how cells protect themselves against damage by sunlight or chemicals, which is important for understanding how normal cells turn into cancer cells. I never liked science classes in high school. It was only when I really got to do science during summers in college that I knew I wanted to be a scientist. I majored in Environmental Science at Wesleyan University in Connecticut, but switched to Molecular and Cell Biology for my PhD at UC Berkeley.

Kate Alfieri

Graduate Student Researcher, UC Berkeley

Table 11, 12, 10

kate.alfieri@gmail.com

I am a graduate student at UC Berkeley studying the proteins that are involved in the immune response.. I got interested in science when I took high school biology and learned about different human diseases. In college, I realized that chemistry is fundamental to understanding biology, since big molecules called proteins are responsible for most biological processes.

Kenyon Johnson

Public Information Officer, Caltrans

kenyonjohnson2002@yahoo.com

I was born and raised in San Francisco by parents who encouraged my curiosity. That interest in knowing how things work has served me greatly throughout my career of nearly 20 years in engineering. I now work as a Public Information Officer on the San Francisco Oakland Bay Bridge Project. It has given me the unique opportunity to use my engineering background to speak to students and the greater community about the importance of STEM programs and infrastructure projects like the Bridge. I hope to encourage children to never lose their curiosity in their careers and to keep learning about the world around them.

Kirin Basra

Senior Food Technologist, Del Monte Foods

Table 20, 21, 19

kirin.basra@delmonte.com

Two of my greatest passions in life are food and science. I was able to combine these two disciplines in UC Davis, where I obtained a Bachelors of Science in Food Science. What is Food Science? Food science is the study of the physical, biological, and chemical makeup of food; and the concepts underlying food processing. My role as in Del Monte enables me to develop great tasting products while combining science discoveries and technologies that ensure products are safe and nutritious.

Kurt Krueger

Table 30, 28, 29

Mechanical Technician,

Lawrence Berkeley National Laboratory

KRKrueger@lbl.gov

I am a Mechanical Technician for Lawrence Berkeley National Laboratory. I support scientists by listening to them describe what they think they need to perform their experiments. Then, I design and build what they describe. Before my current job, I worked in motorsports and studied Industrial Arts.

Laura Verduzco

Table 21, 19, 20

Lead Planning Engineer, Chevron Corporation

laurav@chevron.com

I am a lead planning engineer with the Chevron Corporation working in the low carbon technologies group. I help assess global climate change-related issues such as a greenhouse gas lifecycle assessment of fuel products, including biofuels; an assessment of advanced wind energy technologies; and working with multi-stakeholder groups addressing issues such as biofuels sustainability and hydrogen production and distribution. I also manage the sustainability-policy pathway of Catchlight Energy, a joint venture with Weyerhaeuser to produce second-generation biofuels. Before this current position, I worked for the US Department of Energy and held different positions in Mexico.

Leona Scanlan

Table 22, 23, 24

Graduate Student, UC Berkeley

LDS@berkeley.edu

I am a graduate student at UC Berkeley studying Molecular Toxicology. For the last five years, I have been studying how chemicals and pollutants in the environment cause toxicity to ecologically important organisms. The reason why I decided to study this field is because I grew up in an old mining town in California, where the land was contaminated with mercury and arsenic. People were concerned with how contaminants in the environment might affect our health.

Lindsay Waldrop

Table 4, 5, 6

Postdoctoral researcher, UC Berkeley

lwaldrop@berkeley.edu

I recently received my PhD from UC Berkeley in integrative biology. My research focuses on how organisms interact with the fluids in their environments. I studied how crabs sniff on land and in the sea for my dissertation, and now I am interested in how sea squirt hearts pump blood. I got interested in science because I ask lots of questions, and it turns out science is the best way to find the answers!

Lindsey Dougherty

PhD Student, UC Berkeley

Table 16, 17, 18

lindseydougherty@berkeley.edu

I am a graduate student at UC Berkeley studying how animals in the ocean use color and light to communicate with each other. Growing up in land-locked Colorado, I didn't get much exposure to the ocean until I was certified as a SCUBA diver when I turned 15. Ever since, my love for the ocean led me to live in Australia, teach diving in Zanzibar, and to conduct reef research in Indonesia.

Lisa Bailey

Medical Director, Alta Bates Summit Medical Center

Table 7, 8, 9

baileyalisa@msn.com

I am a surgeon and medical director of the Carol Ann Read Breast Health Center at Alta Bates Summit Medical Center. I take care of patients with breast cancer and other breast problems. Surgery is one specialty in which you can both cure patients and also investigate how our bodies work. To be a surgeon, I went to college at Northwestern University, then to medical school at Northwestern University Medical School, and then I had to train in General Surgery and Surgical Oncology.

Lisa Fernandez

Graduate Student, UC Berkeley

Table 1, 2, 3

fernandez@berkeley.edu

I am a graduate student at UC Berkeley studying ladybugs in food crops. Ladybugs are beneficial insects because eat harmful pests that destroy crops. I conduct experiments that help determine what harms or helps ladybugs. I love science because it involves doing many of my favorite things: being outdoors, learning about plants and animals, and exploring.

Matthew Fillingim

Research Physicist,

UC Berkeley, Space Sciences Laboratory

24, 22, 23

matt@ssl.berkeley.edu

I am a research physicist at the Space Sciences Laboratory at UC Berkeley where I study the upper atmosphere and space around Earth, Moon, and Mars. I try to understand the information that comes back from satellites. I have always been fascinated by other planets. I can remember seeing pictures from the surface of Mars taken by Viking and pictures from Voyager as it flew by planets never seen up close before and thinking, "I want to know more about those places." I also like to tell people about the neat things we've found.

Michelle Moy

Food Technologist III, Del Monte Foods

Table 23, 24, 22
Michelle.Moy@delmonte.com

I am a food scientist working at Del Monte Foods in the Fruit 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.

Monica Jane Albe

Senior Museum Scientist,

UC Berkeley, Museum of Vertebrate Zoology

Table 19, 20, 21

mjaskel@berkeley.edu

I am a scientist at the Museum of Vertebrate Zoology at UC Berkeley where I run the "Prep Lab," where flesh eating beetles clean animal skeletons for the museum's collections. As a child, I spent time raising injured animals and collecting natural history objects like seashells, feathers, and rocks. Although I was fascinated with nature and animals, I didn't realize that I could be a scientist. It took a while to figure things out, but I found my passion in community college, when I took biology and started bringing in my own "specimens" to share with the class.

Nicholas McConnell

Graduate Student, UC Berkeley

Table 27, 25, 26
nmcc@berkeley.edu

I am a PhD student in Astronomy at UC Berkeley. I use giant telescopes to search for supermassive black holes in distant galaxies. When I was young my parents gave me books about dinosaurs and volcanoes and creatures in the deep ocean. I had so many questions about the weird stuff in those books, and I just kept asking questions as I grew up. Now it's my full-time job!

Percy Link

graduate student,

UC Berkeley, Dept of Earth & Planetary Science

Table 25, 26, 27

plink@berkeley.edu

I am a graduate student at UC Berkeley studying atmospheric science and hydrology (the study of the water cycle). I investigate how water evaporates from the land surface and returns to the atmosphere as vapor. The water cycle is really interesting because it is very dynamic, and because water is so important for people and ecosystems. I enjoy being an earth scientist because I love learning about how the natural world around me works.

Rachel Pepper

Table 9, 7, 8

Postdoctoral Research Fellow, UC Berkeley *rachel.pepper@berkeley.edu*

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.

Shannon Cavness

Table 28, 29, 30

Criminalist II,
Oakland Police Department *scavness@oaklandnet.com*

I have a Master's degree in Forensic Science from UC Davis. I worked as an intern at the Department of Justice and was hired as a Criminalist after graduation. I work at the Oakland Police Department Criminalistics Division in the forensic biology and crime scene units. I have enjoyed solving puzzles since I was a little girl. I always wanted to be a detective as a child and now I am a "biological detective".

Ted Sanders

Table 3, 1, 2

Graduate Student,
UC Berkeley/Stanford University *tedsanders@berkeley.edu*

I am a PhD student at Stanford University studying Applied Physics. I spend my days using lasers to grow very thin crystals. Then, I conduct experiments on those crystals using x-rays, superconducting magnets, and liquid helium (kept at temperatures only a few degrees above absolute zero). These experiments help reveal the physics of new materials that may someday be the basis for new technologies!

Wenyu Zhang

Table 29, 30, 28

R&D Scientist, The Clorox Company *wenyu.zhang@clorox.com*

I am a scientist at the Clorox Company where I have the opportunities to use what I know about chemistry to invent cool things that can make our everyday life better. I am originally from China and earned my PhD at UCLA. Growing up I was amazed by the beauty of chemistry, which explains everything in our daily life, simple or complex, with its theories of atoms and molecules.

Participating Elementary Schools

Allendale, Ascend, Bella Vista,
Bridges Academy, Fruitvale, Futures, Garfield, Glenview,
Global Family School, Hoover, Horace Mann, La Escuelita,
Lafayette, Lazear, Learning Without Limits,
Manzanita Community School, Manzanita Seed,
Maxwell Park, New Highland Academy, PLACE at Prescott,
Redwood Heights, Think College Now

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