

March 8-9, 2011



# Synopsys Championship

## Newsletter 2011



### Welcome from Gary Robinson, President, Synopsys Outreach Foundation

Welcome to the 2011 Synopsys Championship, one of the most highly regarded and eagerly anticipated regional science fairs in California. Joining you at this event are some of the best young minds in Silicon Valley. Many Synopsys Championship alums have advanced to the state and international competitions over the years, but that fact is secondary. What's

important is that you did the hard work, overcame the inevitable obstacles in your research, and are here to compete. This will be, we promise, an experience you'll remember and treasure for years to come.

In addition to annually supporting more than 130,000 students and teachers developing science projects, it has been the great honor of the nonprofit

Synopsys Outreach Foundation to serve as the major sponsor of The Synopsys Championship for the last decade. This event, run mostly by volunteers, just keeps getting better. No matter which college major you choose or career path you take, the science fair is one of life's more memorable experiences. We hope you enjoy it.

### Welcome from Prema R. Rao, Ph.D., President, SCVSEFA

On behalf of the Santa Clara Valley Science and Engineering Fair Association, valued sponsors, and dedicated supporters, I welcome you—students, parents, teachers, judges, mentors and visitors—to the 2011 Synopsys Championship! This year we celebrate the 51st year of the regional fair and 11th year with our esteemed major sponsor, the Synopsys Outreach Foundation. It is encouraging to see students returning to compete year after year. This year, we also have many new students, teachers, and schools engaged in the Championship.

Project quality has steadily improved over the years, as attested by the numerous awards won at State and International levels. Of course, students deserve credit for their dedicated, disciplined efforts. Others deserving recognition include parents for their support and sacrifice and teachers for their encouragement

and guidance. The Scientific Review Committee (SRC) and Investigational Review Board (IRB) members meticulously review each project application and provide valuable feedback to improve project quality when applicable. Students also have the opportunity to take advantage of SCVSEFA clinics, workshops, and mentorship programs. Continuous quality improvement is our ongoing objective and we request all, especially students, teachers, and mentors, to join in this endeavor. In an ideal scenario, participation in the Championship has many benefits. Students hone academic as well as other practical skills such as their planning, organization, and presentation abilities. They learn to take initiative and persevere to complete a project despite inevitable obstacles. Most importantly, it is our hope that students awaken to the wonders and power of science and engineering,

our mission. Working on a science fair project has the potential to elicit hidden talent and creativity within a student. A disciplined, dedicated, and determined student has much to discover about the subject matter and also about him/herself. Such discoveries are often transformative and have long-lasting, positive benefits.

I would like to take this opportunity to sincerely thank our sponsors, volunteers, mentors, teachers, judges, and the SCVSEFA board members and staff for making this event possible. Thank you! Our students are indeed fortunate to live in such a supportive community. Just as a seedling, when nurtured, is transformed to a tree over time to provide fruit, shade, wood, and beauty, I look forward to our students deploying their innate talents and acquired skills to create a better world for all.

Welcome, and enjoy your day!

**OUR MISSION IS TO AWAKEN MORE STUDENTS TO THE WONDERS AND POWER OF SCIENCE AND ENGINEERING**

***“We need to teach our kids that it’s not just the winner of the Super Bowl who deserves to be celebrated, but the winner of the Science Fair.”***

—President Obama, State of the Union Address, January 25, 2011



## California State Science Fair and the Top Two Awards

The 2010 California State Science Fair (CSSF) trip was a whirlwind, two-day extravaganza showcasing 55 of the top Synopsys projects. Having your project selected to represent Santa Clara County is quite an honor. The first day of the 2010 whirlwind kicked off when participants met at the San Jose Airport and occupied a large percentage of an LAX flight. We then completely filled a 61 seat, luxurious rental coach (aka bus) to the fair venue and project setup. After verification, photos, and a sneak peak at the competition, everyone finished hotel check-in and then devoured Chipotle and Quiznos sandwiches for lunch. It was a gorgeous southern California day, and students went in different directions—some to the iMax, others to tour the museums, and others to soak up the sun. After dinner and announcements, we had our traditional wild and crazy icebreaker games, complete with ‘awards’ for winners. Then off to a good night’s sleep in preparation for the fair judging.

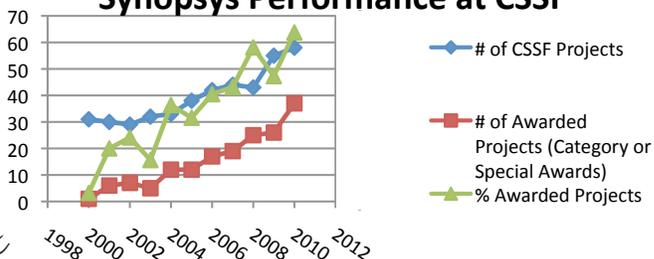
Our nattily clad participants eagerly consumed continental breakfast at the Radisson (the cinnamon rolls and donuts were the biggest hits) and set off for CSSF, a ten minute walk across the street. The afternoon awards ceremony turned out to be an awesome and rewarding time for the Synopsys delegation: 37 of our allocated 55 projects (67%) brought home at least one award. (The attached graph shows our ten-year performance history.) But as magnificent as these numbers were, the crowning achievement for the trip was winning *both* Project of the Year Awards! Natalie Ng won the \$5,000 tJunior Division award for her project, “A Conductometric Biosensor for the Detection of Food-Borne Pathogens,” and Kaavya Jayram won the \$10,000 Senior Division award for her project, “Crank 0 Partitions and the Parity of the Partition Function.” This “double science fair victory” was a fitting end for all students who put so much energy into their projects. Everyone saw what can be achieved and is further motivated for future projects. Go, science fairs! Go, Synopsys Champions!!



Natalie Ng

Kaavya Jayram

### Synopsys Performance at CSSF



—Bruce Kawanami

## The Winners’ Circle

Approximately 10 percent of the participants at the Synopsys Championship were outstanding representatives of our fair at both the 2010 California State Fair in Los Angeles and the 2010 Intel International Science and Engineering Fair (Intel ISEF) in San Jose. Because of their excellent projects and superior presentations, the Santa Clara County fair is recognized as one of the premier fair organizations in the state and at the international fair level. The SCVSEFA Board of Directors honors these students at the annual WINNERS CIRCLE which takes place in the beginning of each school year at the Tech Museum in San Jose. We feel that the best ambassadors for the fair and science projects, in general, are past winners. These 6-12th graders will be the science fair “ambassadors” for the 2011 Synopsys Championship.

# Intel International Science and Engineering Fair 2010



The Intel International Science and Engineering Fair (Intel ISEF), a program of Society for Science & the Public, is the world's largest international pre-college science competition, the premier pre-college science competition in the world. The Intel ISEF annually provides a forum for more than 1500 high school students from over 50 countries to showcase their independent research, and it gives them the opportunity to compete for nearly \$4 million in prizes and scholarships. Millions of students worldwide compete in local science fairs each year; winners go on to participate in Intel ISEF through affiliated regional, state, and national fairs. Uniting these top young scientific minds, the Intel ISEF showcases their talent on an international stage where their work is judged by an elite corps of doctoral level scientists.

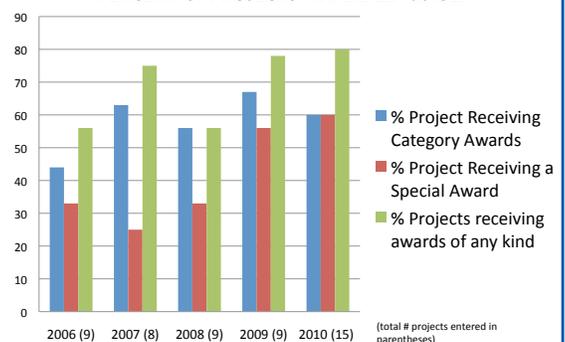


Left to Right: Athman Adishesan, Revanth Kosaraju, Alex Han, Ritik Malhotra, Kevin & Nicholas Crispie, Sudi Bhat, Akshay Nathan, Priyanka Athavale, David Zarrin, Emily Cheng, Tony Ho, Justin To, Aakriti Jain, Jeannie Tran, Katerina Trinh, Van Tran, Angela Zhang, Vivian Macnguyen.

In 2001, San Jose hosted the Intel International Science and Engineering Fair (Intel ISEF) for the first time. It was also the first time SCVSEFA sent more than two students to the ISEF. That began a trend of increasing quality and more competitive projects at the Synopsys Championship that has the rest of the country calling to ask us how we do it. When ISEF returned to San Jose last May, we sent 21 students to compete, and they did not disappoint, bringing home more awards than ever, including first place medals for senior Justin To (Oak Grove High School) and freshman David Zarrin (Saratoga High School) and a \$25K scholarship offer for junior Akshay Nathan (Lynbrook High School, San Jose).

Students who win a spot at ISEF experience a week like no other. Much like the Synopsys Championship, it often begins with registering and setting up boards, but then it starts to ramp up. Sunday night is a pin exchange with other brilliant teens from 62 countries, Monday is the opening ceremonies, and Tuesday there are discussions with Nobel Laureates. Wednesday is a full day of judging followed by a party. The public gets to visit on Thursday morning. Thursday evening and Friday morning are the award ceremonies where the world finds out who wins a share of the \$3 million in prizes, trips, and awards. Every attendee is a winner, though, having made new friends and connections from the US and beyond—and having bonded with 20 other students from Santa Clara County.

PERCENT of PROJECTS AWARDED at ISEF



## Check Out the Gold Star

The gold star in the lower right corner of the teacher and student name badges indicates how many years the wearer has participated in the Synopsys Championship. The 2011 students with longest number of participation years are **Elizabeth Bernal** from Presentation High School, **Suchita Nety** from Harker School, **Deepika Bodapati** from the Schmahl Science Workshop, **Kevin Crispie** from Mountain View High School, **David Zarrin** from Saratoga High School, and **Ratnalekha Viswanadham** of Monta Vista High School, all of them with five years of participation. David Liu, who graduated last year, was a SEVEN YEAR participant in the Synopsys Championship!

## The Power of Science Fair Participation

I've been involved with the science fair for thirteen years now and I spend hundreds, if not thousands, of hours each year cajoling students to follow the rules, fill out the paperwork correctly, do a better project, select a measurable endpoint. Why do I do it? My husband grumbles about the neglected house and garden, the teachers have to put up with endless notes, and I don't even think of taking vacation in the December-to-March time frame.

I do it because I want students to have this amazing opportunity. A science fair project might be one of the most difficult things they do in school. They have to conduct research, come up with ideas and testable questions, create an experiment or design an engineering project, overcome problems encountered along the way, generate data, analyze what they mean—or don't, then put it together on a project board so they can talk to a judge. And if the judge does a good job, he or she will ask them questions that will make them think more deeply about their project. What training for life in this amazing world in which we live.

Not every student has a life-changing experience from participating in the science fair, but for many it is a transformation.

I remember the story of the flunking sophomore who had languished in his brilliant sister's limelight. He came to the science fair and between talking to the judges he talked to the students around him. I don't recall if he won a prize or not for his project but he won something else—the realization that he would never get into college unless he changed. Suddenly the C's and D's changed to straight A's and he was able to go to UC despite a GPA of 3.0—because he told this story in his college application essay.

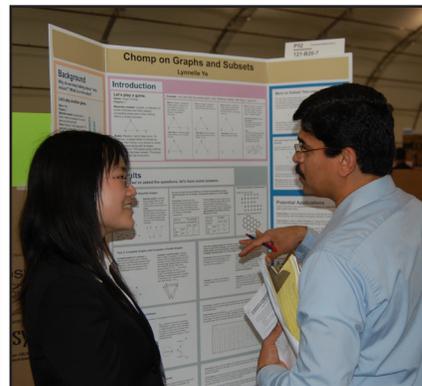
I loved the parent who came to talk to me at the Awards Ceremony one year. She spoke little English but her daughter had won an Honorable Mention ribbon the previous year. During the ceremony she understood how important education was for her daughter—and for herself. She was inspired to go back to school and work on *her* GED. And she did.

In general I am not an advocate of teachers who require students to do a project, but sometimes the experience lights a spark that cannot be extinguished. One student did a required engineering project—perhaps he won something, or maybe not. The next year's project was completed months in advance during summer

vacation. He never looked back and went on to be one of our Grand Prize winners, representing the Synopsys Championship at the Intel International Science and Engineering Fair.

I am amazed by the creativity of some students and the passion that some of them exude for their projects. After a few years of grumbling, I persuaded my husband to be a judge—the kind that looks at many projects and talks to many students. That evening he talked non-stop for three hours about all the projects that he had seen and the conversations he had had—with a student growing freshwater mussels in a stream, with students measuring changes in nitrates in soils plus or minus earthworms, with a sixth grader who discovered that many sixth graders identify fellow students by their shoes! Each year the convention floor is full of interesting and unexpected data that have been discovered by students pursuing their passions. Best of all this experience opens a window to a world full of exciting science and engineering opportunities and careers.

—Ann Burrell, Ph.D.



***"Far and away the best prize that life offers is the chance to work hard at work worth doing"***  
—Theodore Roosevelt

We recently received a very nice letter from Lich Tran, father of Quang-Van Tran, our 6th grade CSSF winner, who wrote us:



“Quang-Van Tran was born in Berkeley. We were living in an apartment building near UC Berkeley campus. Most of the residents there were students, so our son did not have any friend of his age to play with until he was two years old when our second son, Quang-Long, was born. We lived at the same place for another two years until we decided to move to Santa Clara to be close to work and also for Van to start preschool at Saint Lawrence Elementary and Middle School. The preschool teacher told us that he was very quiet and shy. This limited his capability to perform

in class especially in oral testing or exercises. Months went by and Van felt more comfortable talking with his classmates, but he was still very quiet to the extent that he initially failed his final oral exam to be graduated from preschool to kindergarten because he did not answer the examiner who was a different teacher.

We moved again to San Jose, and he started third grade at Most Holy Trinity School. Again, his teacher mentioned to us that Van was a good student, but very quiet.

Last year, when his project was selected by the school to attend the Synopsys Silicon Valley Science and Technology Championship, he was very excited. We were concerned that he was too quiet to handle the interviews by the judges and to express his thoughts and ideas clearly to the public. We encouraged Van to do his best anyway. We also brought his two younger brothers, Quang-Long (10 years) and Quang-Dan (8 years), to the show.

All of us, including my wife and myself, were at the show for the first time. It was a pleasant surprise to see the large number of contestants and the wide variety of ideas and innovations at the show. It was a good experience for the whole family, especially the three kids. Van’s “Double and Triple Pane Window” won First Place in Engineering and Third Place from SAMPE.

All the kids had a very good time at the award ceremony event held at Great America. We believe the recognition Van received really affected his feelings about science and engineering. We could tell from that moment that his attitude about technology was different. He told me that when he grows up he wants to be an engineer like daddy.

Van’s project was chosen to attend the State Science Fair in Los Angeles. We drove him down there with his younger brothers so they, too, could attend the fair. Van’s project won an Honorable Mention in Physical Science, Products. Again, it was very good experience for the whole family to see the creativity and hard work of these young future engineers and scientists from our state.

After the Science Fair, Van already planned to be back next year. He really got motivated. And to our surprise, a couple of months later, he was running for student council, the Commissioner of Technology, and got elected. We believe he became more socialized and more dedicated to science and technology because of the experience he had at the Synopsys Championship. As parents of these students, we are grateful to the countless number of staff, volunteers, and donors contributing to the good work of the Science Fair, which is surely making a difference in the future of our kids.”

—Lich Tran

## What’s new? Mentors and Mentoring New Mentor-Mentee Program to Benefit Your Science Research

Starting in 2011, SCVSEFA is excited to introduce a new mentor–mentee program for our students. The goal of the program is to provide an opportunity for our students to work with experts so that they can improve the quality and, hence, the success of their science projects. In this program, students will select a scientist or an engineer as their mentor and interact with them online to seek guidance for their science research. We have been fortunate to have about forty dedicated mentors who have agreed to lend not only their expertise, but also their time and support to our students. The program, which began as a pilot, has attracted several middle and high school students who have gained a wealth of experience interacting with our expert mentors. We at SCVSEFA look forward to continuing this mentorship program to provide a wonderful opportunity to positively impact the outcome of our students’ science research.

—Kavitha Jayachandran, MD

**Rambus**<sup>®</sup>  
Your license to speed™

Once again we would like to thank the Rambus Foundation for their very generous donation for the printing of this newsletter.

*“Let’s also remember that after parents, the biggest impact on a child’s success comes from the man or woman at the front of the classroom ... In South Korea teachers are known as ‘Nation Builders.’ Here in America, it’s time we treated the people who educate our children with the same level of respect ... Become a teacher. Your country needs you.”*

—President Obama, State of the Union Address, January 25, 2011

## Teachers

Approximately 55-60 percent of our teachers return to the Synopsys Championship each year, and we are delighted to have many teachers returning year after year with their best students. **Shagufta Akhtar** of Granada Islamic School, **Narquiz Cervantes** of Silver Creek High School, **Debra Dimas** of Santa Teresa High School, **Gail Inlow** of Redwood Middle School, **Jim Marxmiller** of Mountain View Academy, and **Lisa Wicht** of Saint Joseph of Cupertino Elementary School are all teachers who have inspired students to compete in this fair for **ten** or more years.



High school outstanding teachers for 2010 were Kate Schafer (Harker School) and Amanda Alonzo (Lynbrook High)



The “Most Promising New Teacher” award recipient was Susan Greathouse (Old Orchard School)



Middle School Outstanding Teachers in 2010 were Dawn O’Connor (Solorsano Middle School), Sarah Thaler (Schmahl Science Workshop) and Neha Makhijani (Stratford Middle School)

## Volunteers Return Year After Year

**V**olunteers are always needed, always appreciated...they make it possible for students’ dreams to come true.

2010 Volunteers returning for 2011	54 (out of a total of 74)
Scientific Review Committee Volunteers	17
Staff and Board Members volunteering at the Championship	25

Volunteers make it happen for our students. You can join our volunteer corps when they return next year: click on “VOLUNTEERS” at [www.science-fair.org](http://www.science-fair.org)



The Whitney Education Foundation contributes \$3000 per year to the school of the top project in each affiliation. Schools of the Best Projects in each Affiliation for 2010 were: Lynbrook High School (Physical Science), The Harker School (Biological Science), and Oak Grove High School (East Side Union)

## What’s Next?

**L**ights! Cameras! Action! If you are one of the participants whose project was judged as a First, Second, Honorable Mention, or Special Award in your category and at your grade level, it’s onward to the Awards Ceremonies. You will be invited to attend the appropriate ceremony at California’s Great America on **Sunday, April 3, at 1:00 PM for grades 6-8, and 3:15 PM for grades 9-12.** Each ceremony is preceded by classy, live music as you enter the theater and take your seat.

Drum roll ... Be ready to wend your way to the stage for your moment of glory as your name is called. You’ll shake hands with the presenter and receive your ribbon or medal. Congratulations! But don’t leave yet! You may also get a Special Award—or more than one! Or ... a spot at the California State Science Fair! Or ... an all-expense-paid trip to the Intel International Science and Engineering Fair—the Grand Prize! Entrance to California’s Great America for the day is the gift California’s Great America gives to each of our winners. A very nice reward for a job well done!

You can find out on our website if you are eligible to attend the Awards Ceremony: check out [www.Science-fair.org](http://www.Science-fair.org) after March 16th to see if you are a winner. If you don’t “win” a spot at the Awards this year, you are still a cool young scientist, with more experience now and a better chance when we see you at the Championship next year!

## Special Awards Sponsors

<i>Al Foster Award</i>	<i>EMS Scholarships</i>	<i>San Jose State University College of Engineering</i>
<i>American Association for Laboratory Animal Science</i>	<i>Fair manager's Graphic Design Award</i>	<i>San Jose State University Student Affiliates of the American Chemical Society</i>
<i>American Chemical Society, Santa Clara Valley Local Section</i>	<i>Genencor Biotechnology Awards</i>	<i>Santa Clara County Biotech Education partnership (SCCBEP)</i>
<i>American Institute of Aeronautics and Astronautics (AIAA) Intelligent Systems Award</i>	<i>Hegland Award</i>	<i>Santa Clara County Integrated Waste Management Program</i>
<i>American Meteorological Society</i>	<i>Hewlett-Packard Laboratories</i>	<i>Schonert Award</i>
<i>American Psychological Association</i>	<i>I-SWEEP Awards</i>	<i>Society for In Vitro Biology</i>
<i>American Society of Civil Engineers</i>	<i>Institute of Electrical and Electronic Engineers</i>	<i>Society of Vacuum Coaters</i>
<i>American Society of Heating, Refrigeration and Air Conditioning Engineers</i>	<i>Intel Excellence in computer Science Award</i>	<i>Society of Women Engineers</i>
<i>American Vacuum Society – No. CA Chapter</i>	<i>Labcoat Award for Lab Bench Finesse</i>	<i>Stockholm Junior Water Prize</i>
<i>Apatite to Zircon, Inc. Award</i>	<i>MedImmune</i>	<i>System Safety Society</i>
<i>ASM International, A Society for Materials</i>	<i>Monterey Bay Aquarium</i>	<i>The Tech Museum of Innovation</i>
<i>Association for Women Geoscientists, SF BA Chapter</i>	<i>Morgan Lewis</i>	<i>The ROD Women in Science Award</i>
<i>Association for Women in Science – Palo Alto Chapter</i>	<i>Mu Alpha Theta</i>	<i>The Synopsys Outreach Foundation n+1 Prize</i>
<i>California Association of Professional Scientists</i>	<i>NASA Ames Research Center</i>	<i>The Tech Summer Camps</i>
<i>California Society for Biomedical Research – Ron Orta Excellence in Biomedical Research</i>	<i>National Oceanic and Atmospheric Administration</i>	<i>Trimble Navigation, Ltd.</i>
<i>California Water Environment Association</i>	<i>National Society of Professional Engineers</i>	<i>United States Air Force</i>
<i>Common Ground Organic Garden Supply &amp; Education Center</i>	<i>Northern California Institute of Food Technologies (NCIFT)</i>	<i>United States Army</i>
<i>Dr. Paul X. Callahan - in memorium Award</i>	<i>Pauchon Foundation Award</i>	<i>United States Coast Guard Auxiliary</i>
	<i>Promethium Chapter of Iota Sigma Pi</i>	<i>United States Metric Association</i>
	<i>Resource Area for Teaching (RAFT) Teacher Award</i>	<i>United States Navy and Marine Corps.</i>
	<i>Ricoh Corporation</i>	<i>Varian Medical Systems</i>
	<i>Robert Brownlee – Schmahl Science Award</i>	<i>Wireless Communications Alliance</i>
	<i>SAMPE – Society for the Advancement of Materials and Process Engineering</i>	<i>Yale Science and Engineering Association</i>

### ***Your Science Fair Needs Your Support More than Ever***

The Santa Clara Valley Science and Engineering Fair Association is a public 501(c)(3) charitable nonprofit corporation under the California State laws. This exempts us from taxes, and all donations are fully tax deductible by the donor. To maintain our non-profit status each year, SCVSEFA must file tax forms and prove to the IRS, FTB, and the CA Attorney General's Registry of Charitable Trusts that we are supported by what is termed "broad public support." This means we need many donors to meet this requirement.

U.S. companies need employees with science and engineering backgrounds, and more young Americans need to be inspired to pursue those fields if we are to be competitive in an international marketplace. The Synopsys Championship gives students a venue for exploring and experimenting with science, as well as the motivation, encouragement and support to do so. In addition, we provide assistance for teachers who want to encourage their students to pursue science, math, and technology studies.

With the current economy we are even more in need of donors to support our operation. Our budget is over \$150,000. If you agree with our mission, "To awaken more students to the wonder and power of science and engineering," and would like to help us continue our work, please consider a contribution to SCVSEFA, PO Box 307, Los Altos, CA 94023-0307, Attn: Pat Castro, Treasurer. If you have any questions, please contact Pat at [pcastro35@gmail.com](mailto:pcastro35@gmail.com).

In addition, if you are interested in becoming a special awards benefactor, a volunteer, or a judge, or if you would like to find out more about mentoring or have new information on mentoring opportunities, please contact the Fair Manager at: [4fairmanager@earthlink.net](mailto:4fairmanager@earthlink.net).

## Major Sponsors

(\$75,000 or more annually)

Synopsys Silicon Valley Science and Technology Outreach Foundation  
California's Great America\*

## Benefactors

(\$10,000-\$74,999 annually)

MedImmune

## Patrons

(\$2,500-\$9,999 annually)

Applied Materials Foundation  
Peter & Pat Castro  
Cisco Foundation  
Intel Foundation  
International Science & Engineering Fair 2010 Association, Inc.  
Rambus Foundation (an advised fund of Silicon Valley Foundation)

## Sponsors

(\$1,000-\$2,499 annually)

Rose Mary Brodbeck  
Peter & Carrie Castro  
interra systems (Veena & Sunil Jain)  
Natalie & John Kunkel  
NetApp\*  
Pine Press, Inc.\*  
Trimble Navigation Limited  
Betty & John Trumbula

## Contributors

(up to \$999 annually)

Frances Acciardi & James L. Leising  
Alpine Awards\*  
Gladys Amenson  
Heidi & Corky Black  
M. Lynn Brewer  
Patsy Callahan for Paul X. Callahan Ph.D. (In Memoriam)  
Central Cash and Carry  
Kuo Liang & Yun Hwa Chiang  
Consilia D'Andrea  
Genencor, A Danisco Division  
Marilyn Gildea  
Hanson Construction\*  
Moenes Iskarous & Nevine Elmasry  
Julie & Ben Karni  
Bruce & Jo Kawanami  
Susan & Art Lange  
Craig Laughton & Ruthie Waters  
Bert & Barbara Laurence  
Nancy Lem  
Lynn & Kathy Liebschutz

Gerry & M.J. Lopatin  
Jordan & Esther Makower  
Martha Maris  
David & Sally Orr  
Prema & Srinivas Rao  
Slavic Anglo American School  
Lydia So & Cho Ng  
John Turner  
Olga Wholey  
Sandi & Steve Yellenberg

\* gifts in kind

*We gratefully acknowledge those who have made gifts in support of the Synopsys Championship in 2011, and we would like to thank those companies who support science education by allowing their employees to take time away from work to judge and volunteer at the Championship.*

*As always, we extend special thanks to Hassan Lashgari and his staff at Pine Press Inc., who have worked tirelessly year after year since 1990 to help the SCVSEFA Board meet its publishing deadlines, and to his wife, Nancy Rowden, who has guided an assortment of newsletter editors from start to finish in the production of press-ready documents. We also extend our sincere appreciation to Alpine Awards and Mary Calhoun, Branch Manager in Sunnyvale, who since 1988 have produced our ribbons and plaques with extreme attention to detail.*

*We also thank the participants, their parents, teachers, mentors, schools, and the Synopsys Championship's major sponsors, The Synopsys Outreach Foundation, and California's Great America, all of whom make the Synopsys Silicon Valley Science and Technology Championship an exceptional event!*

## SCVSEFA Board

### Officers:

Prema R. Rao, Ph.D., President  
Moenes Iskarous, President Elect  
Pat Castro, Treasurer  
Vanessa Burbach, Secretary

### SCVSEFA Current Members

Ann Burrell, Ph.D.  
Heidi Strahm Black  
Veena Jain  
Kavitha Jayachandran, MD  
Bruce Kawanami  
Vinish Lall

Susan Lange  
Lynn Liebschutz  
Sandra Meditch  
Ajay Navaratna  
Larke Reeber  
Lynn Shannon, DVM  
Lydia So  
John Turner  
Kerry Veenstra  
Steven Wang  
Forrest Williams  
Sandi Yellenberg

### SCVSEFA NASA Liaisons

Thomas Clausen  
Karen Gundy-Burlet, Ph.D.

### SCVSEFA Associates

John Bigler  
Bob Billner  
Arlene Brown  
Greg Brown  
Frank Crosby  
Kathy Gannon  
Julie Karni  
Francis Lee  
Gerald Lopatin  
Susan Oldham-Fritts  
Gary Robinson  
Isabelle Stone

### SRC Committee

Ann Burrell, Ph.D.  
Heidi Strahm Black  
Ruth Gordon  
Jenny Kiratli, Ph.D.  
Katy Korsmeyer, Ph.D.  
Francis Lee, M.S.  
Jennifer Lee, Ph.D.  
Lynn Liebschutz  
Gowri Narayanaswami, Ph.D.  
Prema Rao, Ph.D.  
Lynn Shannon, DVM  
Lew Smith  
Mallika Srinivasan, Ph.D.  
Ruthie Waters, M.S.  
Maureen West, M.A.  
Sandi Yellenberg

### SCVSEFA Staff

Carole Kalcic, Fair Manager  
Ruth Sloan, Volunteer Coordinator  
Craig Laughton, Coordinator

Each year, the cost of sending our students from our regional fair to the state and international fairs increases. We need to expand our contributors' base. If you or your employer are looking for a worthy cause to support, please consider helping to fund Silicon Valley's premier science program. For more information please see our website: [www.science-fair.org](http://www.science-fair.org)