

Regeneron ISEF Symposia Schedule

May 11-17, 2024

Los Angeles, CA

Symposia sessions are an opportunity to share information with students, parents, teachers and fair directors, and do not imply endorsement by Society for Science. No fees have been paid.

Monday, May 13

9:00 AM to 9:30 AM

Room: 150C

Innovating Healthcare with 3D Printing

Tess Boehm - Ricoh 3D for Healthcare

Discover the dynamic fusion of 3D printing in healthcare, reshaping medical practices. This presentation explores the transformative impact of 3D printing, from anatomical modeling to bioprinting. High-fidelity anatomical models aid surgical planning, optimizing outcomes. Custom-designed implants revolutionize orthopedics, enhancing fit and biocompatibility. Bioprinting advances tissue engineering, offering potential for engineered organs and regenerative therapies. Emerging applications span drug delivery, prosthetics, and personalized medical devices, driving innovation in patient care. By harnessing 3D printing's versatility, healthcare pioneers are creating a future of personalized medicine and groundbreaking treatments. Join us as we journey through the captivating realm of 3D printing in healthcare, envisioning a future where tailored healthcare solutions are the standard.

Type: Presentation

Audience: Students

9:00 AM to 9:45 AM

Room: 150AB

Understanding Creativity at ISEF and Beyond

Christopher RoDee - ISEF Judging Advisory Committee; Mark Oleksak - STEM Pioneers

Creativity is one of the five major factors evaluated by ISEF Grand Award Judges according to the Judging Criteria. This symposium will aid students in developing skills for a more effective judge interview session through a greater understanding of the characteristics of creativity. The session will also provide tips and techniques that will be useful not only at ISEF, but during the pursuit of future research or innovation endeavors in college and beyond.

Type: Presentation

Audience: Students

9:00 AM to 9:45 AM

Room: 151

Applying to US Colleges and Universities: International Students' Edition

John Yi - Yale University; Jann Lacoss - Caltech

Applying to US colleges and universities can feel especially daunting for students schooled outside the United States. The post-secondary application process is often far more intensive for colleges and universities based in the US as compared to those in other countries, and international students often do not have as many school administrators and/or sources of information as do their US-based peers. This session will aim to provide helpful guidance and tips on how ISEF participants can put their best foot forward as an international applicant. John Yi, Yale University, and Jan Lacoss, CalTech, both have significant experience evaluating admissions applications from around the world and look forward to helping ISEF students unpack college admissions!

Type: Presentation

Audience: Teachers, Students

10:00 AM to 10:45 AM

Room: 151

Judging at Regeneron ISEF

ISEF Judging Advisory Committee

Join us for a question-and-answer session about judging at Regeneron ISEF. The presenters will explain their roles to aid students during judging and provide an overview of the judging process for those new to Regeneron ISEF.

Type: Presentation

Audience: Fair Directors, Teachers, Students

11:00 AM to 11:45 AM

Room: 151

How to apply to college as a researcher

Chris Peterson - MIT; John Yi - Yale; Melissa Rodriguez - Caltech

Discussing strategies for applying to college as a researcher, focusing on how to effectively describe your work and achievements to non-technical laypeople who evaluate applications. Admissions officers from Caltech, MIT, and Yale will share comparative insights to provide broadly applicable advice, followed by extensive Q&A.

Type: Presentation

Audience: Students

12:00 PM to 12:45 PM

Room: 150AB

Regeneron Science Talent Search: A Competition for Rising U.S. 12th Grade Students (Win \$250k!)

Allie Stifel, Elaine Edwards – Society for Science

Regeneron STS Alumni

The Regeneron Science Talent Search, a sister competition to Regeneron ISEF, has identified future leaders in STEM for 82 years. Learn about the competition requirements, application tips, and the more than \$3 million awarded to high school seniors, and their schools each year--including the top prize of \$250,000! Then, during the second half of the session, meet some of the top 40 finalists from this year's competition, learn about their experiences and ask them your questions in a panel interview.

Type: Presentation

Audience: Fair Directors, Teachers, Students

1:00 PM to 1:30 PM

Room: 150AB

Thermo Fisher Scientific Junior Innovators Challenge: Society for Science's National Middle School STEM Research Competition

Nora Kelly – Society for Science

Learn about the Society's competition for 6th-8th graders in this information session for fair Directors, teachers, parents/guardians, and students.

Type: Presentation

Audience: Fair Directors, Teachers, Students

1:00 PM to 1:45 PM

Room: 151

Stemming Up Your Game: Writing essays that highlight your inner scientist

Tessa Tweet - Caltech; John Yi - Yale University

We don't want essay writing to be intimidating, but we know it often is. Your general application essay gives colleges a glimpse into your personality, and institution-specific ones offer the opportunity to highlight your STEMmy side: your curiosity, creativity, and passions. We have put together some advice to help you learn how to channel your inner scientist and write essays that reflect all aspects of your interests. Be prepared to note some ideas and start working on your self-presentation.

Type: Presentation

Audience: Students

2:00 PM to 3:00 PM

Room: 151

Science to Medicine: Perspectives from Regeneron's Chief Scientific Officer George Yancopoulos

George Yancopoulos – Regeneron's President and Chief Scientific Officer

Join us for an inspiring session with Regeneron's Board co-Chair, President and Chief Scientific Officer.

Discover the journey that led him to becoming one of the most successful drug discoverers in biopharma history — from his roots growing up in New York City as the child of immigrants to his transformative science fair experience and educational path. Don't miss the chance to engage directly with George and ask about his remarkable career, groundbreaking work at Regeneron and more.

Type: Presentation

Audience: Fair Directors, Teachers, Students

3:00 PM to 3:45 PM

Room: 151

How Intense is a STEM-Focused Institution?

Nic Lee - Caltech; Peter Osgood - Harvey Mudd College

STEM-focused institutions have a reputation of being especially intense. While college is designed to challenge you to think in new ways, STEM institutions get you to think in terms of the interdisciplinary nature of STEM and learn to work with others who are academic peers. What is it really like to study at an institution that specializes in the STEM fields? How much time is spent on problem sets? Is there time to sleep?! A panel of students from Caltech and Harvey Mudd College will discuss the ins and outs of college life at their schools. Be prepared to ask them anything!

Type: Panel Discussion Audience: Teachers, Students

3:00 PM to 3:45 PM

Room: 150AB

Society for Science Outreach & Equity Programs Overview

Caitlin Sullivan; Emily Freeland – Society for Science

Come learn about Society for Science's Outreach & Equity Programs for educators and non-profits including our all-expenses-paid Research Teacher Conferences, STEM Action Grants, STEM Research Grants, Advocate Program, Invention Education opportunities, Research Teachers Cohorts, and more!

Type: Presentation

Audience: Fair Directors, Teachers

3:00 PM to 3:45 PM

Room: 150C

How to Harness the Art of Presenting

William Furiosi - Oviedo High School, Seminole County Public Schools, Florida

The ISEF judging rubric weighs the presentation as 35% of the overall score. Subsequently, the more effectively presented research will win more. This session aims to illustrate how students, teachers, and fair directors can better understand and harness the art of presenting to find better success in research competitions. The session will focus on the presentation triangle: (1) poster, (2) oral presentation, and (3) judging. Each facet will be thoroughly discussed regarding best practices for effective delivery, and each of the three will have ample examples of how to practice the art of presenting. For example, participants will be walked through how to evaluate a genuine poster draft with authentic feedback, how to maximize presentation opportunities in a classroom setting, and how to leverage alumni networks for increasing judging experiences. Attendees will come away with example feedback, skills, and activities to improve their presentations and that of their delegations.

Type: Presentation

Audience: Fair Directors, Teachers, Students

Tuesday, May 14

9:00 AM to 9:30 AM

Room: 150C

Discover University of Toronto Engineering

Aaron Wang - University of Toronto

The University of Toronto hosts a global top 20 Engineering school and is behind only Harvard University in North America for the enormous amount of scientific research we generate. This session will introduce attendees to our undergraduate programs, research and work integrated learning opportunities, life in the multicultural city of Toronto, and admissions requirements for Canada's #1 Engineering School. ISEF Finalists who otherwise might not be able to travel to Canada will get first-hand access to information about U of T, a highly selective STEM program outside the US.

Type: Presentation

Audience: Students

9:00 AM to 9:45 AM

Room: 150AB

Teaching Research and STEM Literacy with Science News Learning

Raina Van Duym – Society for Science; Karisa Boyer

This workshop will engage participants in data analysis and experimental or engineering design classroom practices that are tied to Science News Media Group articles and are inspired by current science research. An overview of the Science News Learning program and a digital exploration of the resources will help educators and fair directors find resources that will inspire their instruction. Science News Learning Ambassador and Research Teacher, Karisa Boyer, will share her classroom integration strategies and lesson plan design ideas. Please bring your digital device to the session.

Type: Presentation

Audience: Fair Directors, Teachers

9:00 AM to 9:45 AM

Room: 151

Your Work is EiPIC: Navigating Intellectual Property and Entrepreneurship for Young Innovators

Sara Leikin, Dr. Frederic Bertley - COSI

Understanding entrepreneurship and intellectual property rights is crucial for high school students as it empowers them to protect their creative works and innovative research. By learning about patents, trademarks, copyrights, and trade secrets, students gain an appreciation for the value of their intellectual assets and the legal mechanisms available to safeguard them. This knowledge not only fosters a culture of innovation but also prepares students for future endeavors in entrepreneurship, research, and creative pursuits. Additionally, an understanding of intellectual property rights encourages ethical behavior and respect for the intellectual property of others, contributing to a responsible and collaborative society. The Center of Science and Industry (COSI) will provide an abridged version of our EiPIC (Extracurricular Intellectual Property Innovation Center) program that provides an engaging operational framework for students and adults to learn about the field of intellectual property and entrepreneurship.

Type: Presentation

Audience: Fair Directors, Teachers, Students

2:00 PM to 2:45 PM

Room: 150AB

An Efficient Online Platform for Facilitating Student Science Fair Participation

Traven Watase – MySciFair; Mark Oleksak, Josh Cooper

In today's digital age, fostering a strong connection between teachers, students, and parents through digital platforms is pivotal for enhancing science fair participation across elementary, middle, and high school levels. MySciFair allows for seamless communication, making it easier to share updates, complete forms, and provide and receive feedback instantaneously. This encourages continuous engagement for students, teachers, and parents throughout the science fair season. By streamlining administrative

processes, we enable students to focus their energies on cultivating curiosity and innovation. With the administrative burden reduced, an increase in the quality and quantity of projects follows. Harnessing the power of digital tools, parents and teachers can reduce form fatigue, enhancing their overall experience, furthermore, increasing participation. MySciFair simplifies the science fair experience with use of our Forms features, resource page for inspiration, and being able to communicate with team members, teachers, and mentors.

Type: Presentation

Audience: Fair Directors

2:00 PM to 2:30 PM

Room: 150C

Thinking Outside the Classroom - Skill Learning Opportunities During Summer

Richard Myhill - London International Youth Science Forum, LIYSF CIC

This presentation will outline the value of doing extra-curricular STEM activities. Why top universities are looking for more than just exam grades and how students can benefit from this experience. Attending a science camp/fair/competition/event can help students decide on their future study path and career and help them stand out in an application. This presentation will give some tips for what to look out for and what to consider. The presentation will give information as an example about one international STEM summer camp program - the London International Youth Science Forum. Richard Myhill has over 15 years of experience in the field.

Type: Presentation

Audience: Fair Directors, Teachers, Students

2:00 PM to 2:45 PM

Room: 151

Protect Your Ideas with Intellectual Property Rights

Kathleen Lanman, Rose Moe - United States Patent and Trademark Office

In the session "Protect Your Ideas with Intellectual Property Rights," ISEF innovators will delve into the critical world of intellectual property (IP) protection. Discover the significance of patents, trademarks, copyrights, and trade secrets in the realm of scientific research and innovation. This workshop will equip you with the knowledge to safeguard your creative projects and technological advancements, ensuring that your intellectual efforts are legally protected and commercially viable. Learn how to navigate the IP landscape, understand the process of securing your work, and recognize the value of your innovations in the competitive global market. Whether you're developing a groundbreaking scientific discovery or an inventive solution to a common problem, this session is essential to ensuring that your ideas remain yours, paving the way for future success and recognition in the field of science and technology.

Type: Presentation

Audience: Students

3:00 PM to 3:45 PM

Room: 150AB

A Path to Careers in the Semiconductor Industry, Presented by Qorvo

David Cayll, Phuong-Thao Ton-Nu, Gergana Drandova - Qorvo

Qorvo experts will present a high-level overview of the semiconductor industry value chain. We will discuss the different types of companies that help to build the chips that go into all of our electronics, from smartphones to satellites. We will then dive deeper into the Qorvo-specific value chain and the types of career roles we need to create the chips we provide to our customers. Then, we will do a quick intro of all the panel participants and their paths to their current roles at Qorvo. Finally, we will open the floor to any questions attendees have about preparing for a career in this exciting, high-tech field.

Type: Panel Discussion

Audience: Fair Directors, Teachers, Students

3:00 PM to 3:30 PM

Room: 150C

Capitalize on Your Success: How to Access Paid Research Experiences for Undergraduates

Glynis Pereyra - Long Island University

Many first-year college students are unaware of the prestigious paid summer opportunities available for undergraduate researchers in a wide variety of disciplines. Why should students pursue these experiences? Where do they find the available options? How can they design a competitive application? This session will cover the availability and application process for grants and stipends available to conduct undergraduate research. Examples include the NSF REUs, NIST SURF programs, DOE SULI programs, and NIH SIP. We will review application timelines and tips for success as well as eligibility differences to look out for when applying. Recorded student testimonials from past participants will be reviewed and the benefits of being actively engaged in undergraduate research will be highlighted.

Type: Presentation

Audience: Teachers, Students

3:00 PM to 3:45 PM

Room: 151

Caltech Undergraduate Admissions Information Session

Jann Lacoss – Caltech

Join us for a session led by an Admission Officer who will present on the essence of Caltech and the application requirements in the first thirty minutes. We will cover Caltech culture, undergraduate research opportunities, academics, and student life. Following the presentation, there will be a Q & A session for you to ask your most pressing questions.

Type: Presentation

Audience: Fair Directors, Teachers, Students

Wednesday, May 15

10:00 AM to 10:45 AM

Room: 151

SRC Rules Review by Regeneron ISEF Scientific Review Committee

Regeneron ISEF Scientific Review Committee

Meet with members of the Regeneron ISEF Scientific Review Committee to discuss rules review by local and regional SRC's.

Type: Panel Discussion

Audience: Fair Directors, Teachers, Students

11:00 AM to 11:45 AM

Room: 150C

Writing an effective letter of recommendation for your research mentees

Chris Peterson - MIT; Tessa Tweet - Caltech

We will discuss how to write an effective letter of recommendation on behalf of your mentees for their college application. While mentors are often experienced recommenders, the processes and expectations for college applications differ dramatically from graduate schools and fellowships. In this presentation, admissions officers from MIT and Caltech will provide insight and advice, as well as take questions from the audience.

Type: Presentation

Audience: Fair Directors, Teachers

11:00 AM to 11:45 AM

Room: 151

Protect Your Ideas with Intellectual Property Rights

Kathleen Lanman, Rose Moe - United States Patent and Trademark Office

In the session "Protect Your Ideas with Intellectual Property Rights," ISEF innovators will delve into the critical world of intellectual property (IP) protection. Discover the significance of patents, trademarks, copyrights, and trade secrets in the realm of scientific research and innovation. This workshop will equip you with the knowledge to safeguard your creative projects and technological advancements, ensuring that your intellectual efforts are legally protected and commercially viable. Learn how to navigate the IP landscape, understand the process of securing your work, and recognize the value of your innovations in the competitive global market. Whether you're developing a groundbreaking scientific discovery or an inventive solution to a common problem, this session is essential to ensuring that your ideas remain yours, paving the way for future success and recognition in the field of science and technology.

Type: Presentation

Audience: Fair Directors, Teachers

1:00 PM to 1:45 PM

Room: 151

Regeneron ISEF Display & Safety Rules

Regeneron ISEF Display & Safety Committee

Come join the Display & Safety Committee to discuss infractions encountered this year as well as changes to the rules and guidelines for 2024. Bring your questions for the committee to answer.

Type: Panel Discussion

Audience: Fair Directors, Teachers

2:00 PM to 3:30 PM

Room: 151

(Almost) Everything You need to Know to Grow and Improve Your Science Fair: Part II

Jody Oostema; Michael Blueglass; Jordan Krell; Alexa Groff; Emily Meyer

We will share information to encourage, motivate and empower fair directors to improve their own science fairs! We are aware that all fairs are different and we plan to share information that everyone can use regardless of fair size, rural or city locations.

Type: Panel Discussion

Audience: Fair Directors, Teachers

Thursday, May 16

10:00 AM to 10:45 AM

Room: 151

Protecting Ideas and Inspiring Students: A Practical Guide to IP for High School Educators

Reginald Duncan, Rose Moe - United States Patent and Trademark Office

In this dynamic hands-on session, educators will dive into the world of patents, examining two original patents to uncover the intricacies of intellectual property protection. Participants will engage in a detailed analysis of these patents, exploring their structure, claims, and the innovative ideas they protect. This exploration will serve as a springboard for creativity, as teachers will then use their insights and ingenuity to conceptualize a new invention. This workshop not only aims to enhance understanding of the patent process but also encourages educators to think like inventors, fostering a creative mindset that they can bring back to their classrooms. By the session's end, participants will have a solid grasp of patent fundamentals and be inspired to nurture a culture of innovation and intellectual curiosity among their students.

Type: Hands-on Workshop Audience: Fair Directors, Teachers

2:30 PM to 3:15 PM

Room: 150C

Science + Policy: Bringing Research Out of the Lab and into the Real World

Laalitya Acharya - The Nereid Project

During my session, I'll delve into science-policy, dissecting recent bipartisan US legislation like the CHIPS and Science Act, Inflation Reduction Act, and COVID-19 response - emphasizing the integration (or lack thereof) of science in these decisions. I'll also offer insights that draw from my experience working on the CHIPS Act during Congressional internships. Next, participants will split into four groups focusing: on energy, healthcare, AI, and the environment. Using either one of their own research projects, a project they've seen at ISEF or a new idea, each group will craft a policy memo outlining how to integrate their research into policy and give a 2-minute presentation to the group.

Type: Hands-on Workshop Audience: Fair Directors, Teachers, Students

2:30 PM to 3:15 PM

Room: 151

Practical Outreach Engagement focused on 21st Century Skills for Student's Career Journey

Mark Oleksak; Dr. Maysaa M. Al-Qurashi; Mr. Waleed I. AlRebdi; Dr. Tareq Nada - Mawhiba

This panel discussion aims to provide experts, and corporate professionals to share insights, exchange practical methods and success stories and collaboratively envision a future where students are equipped with the skills necessary to thrive in the 21st century. The panel will discuss the role of educators, administrators, and organizations in creating an environment that nurtures these students' skills. It will examine the evolving nature of the workforce and the skills that are increasingly valued in the job market. The panelists will contribute to the ongoing conversation on shaping education and the workforce to meet the demands of an ever-changing world.

Type: Panel Discussion Audience: Fair Directors, Teachers, Students