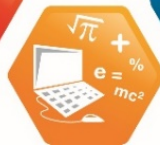


# Beal Bank 2021 Awards Program

**Beal Bank**  
Dallas Regional Science  
and Engineering Fair

**DRSEF**





April 24, 2021

Today, as we honor the accomplishments of all the extremely bright, talented students who months or even years ago started researching some basic questions about this great universe of ours, we also honor the process of discovery — this process we call science.

At Beal Bank, our strong commitment to science led us to begin sponsoring the Dallas Regional Science and Engineering Fair, first by funding prizes and trips, and now for over ten years as sole title sponsor. The foundation of this commitment is our belief that the next generation of scientists, with the proper nurturing and encouragement, will ultimately answer those many unanswered questions, and in doing so push the science and research envelope to the edge and beyond.

Young people are fueled by a free-thinking ability that enables them to see the world, and indeed, the universe, in terms of just two questions: Why? And why not? This year's Science Fair participants have again shown that in all disciplines of science much work remains to be done. They have asked their questions and gone about the painstaking process of research and testing. In some cases, hypotheses were confirmed; in others, they were disproved. But in all cases the questions were worthwhile. Some students are so passionate about their research they are into their third, fourth, even fifth year of study on the same topic — showing that they will not rest at “good enough.” They want to discover the answers they feel certain are attainable.

As a Texas-owned, Dallas-based company, we could not be prouder of these young scientists from our very own region. To every participant who dared to go beyond the genius of previous generations, we congratulate you and wish you the best. We hope to see you next year, still asking those questions.

Sincerely,

A handwritten signature in black ink that reads "Andy Beal". The signature is written in a cursive, flowing style.

Andrew Beal  
Chairman of the Board, Beal Bank

Thank You to Our Fair Supporters

# Beal Bank

**Beal Bank** is the title sponsor of the Beal Bank Dallas Regional Science and Engineering Fair. The bank is pleased to reward the work of these bright students through support of student prizes, the Awards Banquet, and the winners' trip to the Intel International Science and Engineering Fair.



**Southern Methodist University** has sponsored the Dallas Regional Science and Engineering Fair since the Fair's inception in 1957. Faculty and staff from the University have always played significant roles, and the awards banquet is traditionally held on the SMU campus.

Community Partners:



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## About the Dallas Regional Science & Engineering Fair

Started in 1957, the Dallas Regional Science & Engineering Fair is a volunteer non-profit affiliated to the International Science & Engineering Fair (ISEF), the world's largest pre-college science competition. Around 100 people volunteer their time to administer the fair. This year, over 500 students advanced to the Regional Fair in grades 6-12 from public, private and charter middle and high schools within the Texas Education Agency Region 10.

### The 2021 DRSEF Steering Committee

Michael Adams Plano ISD Safety Co-Chair	Beth Collins Frisco ISD	Andrew Milburn Community Volunteer Treasurer	Karen Shepherd Community Volunteer SRC Chair
Jason Baughman Allen ISD	Nathan Eaton Community Volunteer	Ann Mulvihill Garland ISD	Susan Shipp Carrollton-Farmers Branch ISD
Ken Berry SMU Secretary	John Fattaruso SMU	Chinyelu Okoye Harmony Charter Schools	Adam Unlu Harmony Charter Schools
Karan Bhatia Texas Instruments	Heather Hankamer STEM Advocate President	Fred Olness SMU	Evan Whitfield Coppell ISD
Ashley Carter Plano ISD	Jonathan Kramer Dallas ISD	Kristine Reiley SMU Executive Director	Jawan Wiltz Garland ISD
Jim Chambless Beal Bank	Michael Lindsey Plano ISD Safety Co-Chair	Maria Richards SMU	
Leon Chatman Garland ISD	Derek McDowell Frisco ISD	Justin Ross Community Volunteer	
Krishna Chetty Frisco ISD			

## The 2021 Judging

This year, approximately 300 local scientists and engineers volunteered to judge at the Regional Fair. Judges assess students' projects based on creative ability, scientific thought, engineering goals, skill, thoroughness, clarity, and other criteria. Over the course of three days, about 2,000 interviews were conducted and 250 separate awards made.

### Beal Bank Prizes

Student projects are judged over two rounds in different science categories in junior and senior divisions based on specific ISEF criteria. In the first round, judges interview all students, narrowing the selection of projects to be assessed next. In the second round, judges designate over 100 projects as the first-, second-, third- and, in large categories, fourth-place winners. These win cash prizes from Beal Bank and qualify for the Texas State Science & Engineering Fair. In addition, approximately 65 honorable mention ribbons are awarded.

### Beal Bank Grand Prizes

A new set of expert judges interview the top projects in category and award grand prizes to the top eight projects at the Fair—two per division for both life and physical sciences. Beal Bank sponsors the trip for the senior-division winners and runners-up to compete in the International Science and Engineering Fair.

### Special Awards

Members of local and national organizations attend the Fair to judge projects which fit a specific area of interest to them, using their own criteria to determine winners. This year, students received over 150 special awards from many different organizations.



# **Beal Bank Grand Prize Junior**

## Life Science

### **Prisha - Grand Prize Winner**

Otto Middle School, Plano ISD

*Phytoremediation: An affordable non-toxic approach to extracting heavy metals from soil using hyperaccumulators with chelating agents*

### **Siri - Grand Prize Runner Up**

Otto Middle School, Frisco ISD

*PiRest – An Eye Fatigue Alert Device Using Computer Vision*

## Physical Science

### **Ashley - Grand Prize Winner**

Haggard Middle School, Plano ISD

*Don't Slip*

### **Eric - Grand Prize Runner Up**

Hendrick Middle School, Plano ISD

*Eco Friendly House Design*

# Awards - Junior Division

## Animal Sciences

**Yash Dharankar** Beal Bank First Prize Winner  
North Texas Chapter of the Texas Master Naturalist Junior Division Winner  
Rice Middle School | Plano ISD

**Sydney Vincer** Beal Bank Second Prize Winner  
Murphy Middle School | Plano ISD

## Behavioral and Social Sciences

**Siri Peddinti** Grand Prize Runner Up & Beal Bank First Prize Winner  
Otto Middle School | Plano ISD

**Aashi Oswal** Beal Bank Second Prize Winner  
VanDeventer Middle School | Frisco ISD

**Isabella Anaya** Beal Bank Third Prize Winner  
Uplift Heights Middle School | Charter

## Biochemistry

**Shravan Manoj** Beal Bank First Prize Winner  
Murphy Middle School | Plano ISD

**Isabel Heen** Beal Bank Second Prize Winner  
Otto Middle School | Plano ISD

**Iwi Okoro** Beal Bank Third Prize Winner  
The Cooper Institute Exercise/Health/Nutrition 2<sup>nd</sup> Place Winner  
The Highlands School | Parochial

## Biomedical and Health Sciences

**Bradley Johnson** Beal Bank First Prize Winner  
The Cooper Institute Exercise/Health/Nutrition 3<sup>rd</sup> Place Winner  
Haggard Middle School | Plano ISD

**Lavanya Ajith** Beal Bank Second Prize Winner  
Lawler Middle School | Frisco ISD

**Adam Tahirkheli** Beal Bank Third Prize Winner  
Renner Middle School | Plano ISD

## Biomedical Engineering

**Amelia Krajmalnik** Beal Bank First Prize Winner  
Frankford Middle School | Plano ISD

**Morgan Bowers** Beal Bank First Prize Winner  
Frankford Middle School | Plano ISD

**Ishrith Gowda** Beal Bank Second Prize Winner  
Directed Energy Professional Society 3<sup>rd</sup> Place Winner  
Rice Middle School | Plano ISD

**Rishya Vemireddy** Beal Bank Third Prize Winner  
Rice Middle School | Plano ISD

## Chemistry

**Ryan Lee** Beal Bank First Prize Winner  
VanDeventer Middle School | Frisco ISD

**Meghana Renukprasad** Beal Bank Second Prize Winner  
Rice Middle School | Plano ISD

**Zaki Syed** Beal Bank Third Prize Winner  
WEAT / TAWWA 2<sup>nd</sup> Place Winner  
Renner Middle School | Plano ISD

**Rahul Mehta** Beal Bank Third Prize Winner  
WEAT / TAWWA 2<sup>nd</sup> Place Winner  
Renner Middle School | Plano ISD

## Earth and Environmental Sciences

**Aryan Bangad** Beal Bank First Prize Winner  
National Oceanic and Atmospheric Administration Taking the Pulse of the Planet Award Winner  
Robinson Middle School | Plano ISD

**Abhay Nampootheri** Beal Bank Second Prize Winner  
Pearson Middle School | Frisco ISD

**Arhant Magdum** Beal Bank Second Prize Winner  
Pearson Middle School | Frisco ISD

**Rishi Alluri** Beal Bank Second Prize Winner  
Pearson Middle School | Frisco ISD

**Nawal Iqbal** Beal Bank Third Prize Winner  
Radiant STEM Academy | Parochial

**Lakshitha Balakrishnan**  
WEAT / TAWWA, 3<sup>rd</sup> Place Winner  
Uplift North Hills Middle School | Charter

**Kellan Davidson**  
Association for Women Geoscientists Student Award for Geoscience Excellence  
Alex Sanger Preparatory Middle School | Dallas ISD

**Parker Davidson**  
Association for Women Geoscientists Student Award for Geoscience Excellence  
Alex Sanger Preparatory Middle School | Dallas ISD

**Ananya Gogula**

American Industrial Hygiene Association North Texas Section 1<sup>st</sup> Place Winner  
Uplift North Hills Middle School | Charter

**Tanvi Nerurkar**

WEAT / TAWWA 1<sup>st</sup> Place Winner  
Renner Middle School | Plano ISD

## Embedded Systems

**Daniel Tauhert** Beal Bank First Prize Winner

Renner Middle School | Plano ISD

**Adithya Karthik** Beal Bank Second Prize Winner

Robinson Middle School | Plano ISD

**Charles Holt** Beal Bank Third Prize Winner

The Lemelson Foundation Lemelson Early Inventor Prize Winner  
E.D. Walker Middle School | Dallas ISD

**Andrew Horton** Beal Bank Third Prize Winner

The Lemelson Foundation Lemelson Early Inventor Prize Winner  
E.D. Walker Middle School | Dallas ISD

**Evan Hwi** Beal Bank Third Prize Winner

The Lemelson Foundation Lemelson Early Inventor Prize Winner  
E.D. Walker Middle School | Dallas ISD

## Energy: Sustainable Materials and Design

**Eric Ng** Grand Prize Runner Up & Beal Bank First Prize Winner

Office of Naval Research Naval Science Award Winner  
Hendrick Middle School | Plano ISD

**Krishn Virani** Beal Bank Second Prize Winner  
Collins Leadership Association Outstanding Communications Project 2<sup>nd</sup> Place  
Winner  
Murphy Middle School | Plano ISD

**Lena Doan** Beal Bank Third Prize Winner  
Otto Middle School | Plano ISD

## Engineering Mechanics

**Will Mason** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Schimelpfenig Middle School | Plano ISD

**Siya Tripathi** Beal Bank Second Prize Winner  
Murphy Middle School | Plano ISD

**Keir Nagy** Beal Bank Third Prize Winner  
Haggard Middle School | Plano ISD

**Asiya Mohanned**  
Collins Leadership Association Outstanding Communications Project 3<sup>rd</sup> Place  
Winner  
Otto Middle School | Plano ISD

## Environmental Engineering

**Nagavenkat Modugula** Beal Bank First Prize Winner  
Otto Middle School | Plano ISD

**Saachit Rathi** Beal Bank First Prize Winner  
Otto Middle School | Plano ISD

**Aren Nag** Beal Bank First Prize Winner  
Otto Middle School | Plano ISD

**Jannah Iqbal** Beal Bank Second Prize Winner  
Radiant STEM Academy | Parochial

**Andrew Ye** Beal Bank Third Prize Winner  
Schimelpfenig Middle School | Plano ISD

## Materials Science

**Ashley Thomas** Grand Prize & Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Haggard Middle School | Plano ISD

**Jonathan Smith** Beal Bank Second Prize Winner  
K.B. Polk Center For Academically Talented and Gifted | Dallas ISD

**Asha Mavankal** Beal Bank Third Prize Winner  
Rice Middle School | Plano ISD

**Sai Mavankal** Beal Bank Third Prize Winner  
Rice Middle School | Plano ISD

## Mathematics

**Aryan Rajpal** Beal Bank First Prize Winner  
American Statistical Association - North Texas Chapter Award for Statistical  
Excellence Winner  
Pearson Middle School | Frisco ISD

**Simon Farruqui** Beal Bank First Prize Winner  
American Statistical Association - North Texas Chapter Award for Statistical  
Excellence Winner  
Pearson Middle School | Frisco ISD

**Kailaash Visuvanadan** Beal Bank Second Prize Winner  
Murphy Middle School | Plano ISD

## Microbiology

**Farrah Zein** Beal Bank First Prize Winner  
Wilson Middle School | Plano ISD

**Jalyssa Spencer** Beal Bank Second Prize Winner  
J. P. Starks Math, Science, and Technology Vanguard/Academy | Dallas ISD

## Physics and Astronomy

**Erin Beall** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Otto Middle School | Plano ISD

**Jack Curtis** Beal Bank Second Prize Winner  
Directed Energy Professional Society Junior 2<sup>nd</sup> Place Winner  
Lakehill Preparatory Middle School | Private

**Brooklyn Dimatteo** Beal Bank Third Prize Winner  
Hunt Middle School | Frisco ISD

**Vivian Lindsey** Beal Bank Third Prize Winner  
Hunt Middle School | Frisco ISD

**Niva Malthankar** Beal Bank Third Prize Winner  
Hunt Middle School | Frisco ISD

## Plant Sciences

**Prisha Bhat** Grand Prize & Beal Bank First Prize Winner  
Otto Middle School | Plano ISD

**Khushi Bhalani** Beal Bank Second Prize Winner  
Rice Middle School | Plano ISD



**Raghav Gupta** Beal Bank Third Prize Winner  
Renner Middle School | Plano ISD

## Robotics & Intelligent Machines

**Eshaan Chachad** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Texas Instruments Best Electronics or Computing Project Winner  
Rice Middle School | Plano ISD

**Krishna Shah** Beal Bank Second Prize Winner  
Directed Energy Professional Society Junior 1<sup>st</sup> Place Winner  
Ford Middle School | Allen ISD

**Steven Row** Beal Bank Third Prize Winner  
Wilson Middle School | Plano ISD

**Evelyn Ding**  
Acoustical Society of America Outstanding Acoustic Project Winner  
Collins Leadership Association Outstanding Communications Project 1<sup>st</sup> Place  
Winner  
Robinson Middle School | Plano ISD

**Neel MARRIPALAPU**  
Texas Instruments Best Electronics or Computing Project Winner  
Rice Middle School | Plano ISD

**Kamran Nag**  
Texas Instruments Best Electronics or Computing Project Winner  
The Cooper Institute Exercise/Health/Nutrition 1<sup>st</sup> Place Winner  
Otto Middle School | Plano ISD

## Systems Software

**Ishika Kothari** Beal Bank First Prize Winner  
Rice Middle School | Plano ISD

**Sahasra Yellepeddi** Beal Bank Second Prize Winner  
Ereckson Middle School | Allen ISD

**Arya Soppannavar** Beal Bank Third Prize Winner  
Pearson Middle School | Frisco ISD

**Tanush Saxena** Beal Bank Third Prize Winner  
Pearson Middle School | Frisco ISD

## Translation Medical Science

**Trisha Karthi** Beal Bank First Prize Winner  
State of Texas Chapter Health Physics Society Science Fair Excellence Award  
Winner  
Lawler Middle School | Frisco ISD

**Adithya Prakash** Beal Bank Second Prize Winner  
Uplift North Hills Middle School | Charter

**Aniya Jain** Beal Bank Third Prize Winner  
Murphy Middle School | Plano ISD

**Ishya Jain** Beal Bank Third Prize Winner  
Murphy Middle School | Plano ISD

# **Beal Bank Grand Prize Senior**

## Life Science

### **Sidhya Peddinti - Grand Prize Winner**

Plano East Senior High School, Plano ISD

*ParkinSensor: Computer Vision and Ensemble Machine Learning-Based Early Diagnosis for Parkinson's Disease using Neuromuscular Biomarkers*

### **Abhinav Bichal, Rohan Chimalapati & Sarvesh Sathish - Grand Prize Runner Up**

Lebanon Trail High School, Frisco ISD

*Project CubeNet: Augmenting Wildfire Mitigation With Rapid-Scale Deployment of Low-Cost Nanosatellite Networks Driven By Computer Vision Analysis*

## Physical Science

### **Nethra Krishnan - Grand Prize Winner**

Plano West Senior High School, Plano ISD

*A New Paradigm for the Visually Impaired Spectrum based on a LiDAR System*

### **Harshal Bharatia - Grand Prize Runner Up**

Plano Senior High School, Plano ISD

*DocAide - A Collaborative AI Medical Assistant*

# **Congratulations to the DRSEF students who qualified for Regeneron ISEF 2021**

## **Shriya Bhat**

Plano East Senior High School | Plano ISD

## **Harshal Bharatia**

Plano Senior High School | Plano ISD

## **Abhinav Bichal**

Lebanon Trail High School | Frisco ISD

## **Rohan Chimalapati**

Lebanon Trail High School | Frisco ISD

## **Rithvik Ganesh**

Plano West Senior High School | Plano ISD

## **Nethra Krishnan**

Plano West Senior High School | Plano ISD

## **Abhinav Malkoochi**

Jasper High School | Plano ISD

## **Sidhya Peddinti**

Plano East Senior High School | Plano ISD

## **Sarvesh Sathish**

Lebanon Trail High School | Frisco ISD

## **Kevin Sun**

Jasper High School | Plano ISD

## **Vishnu Vasudev**

Liberty High School | Frisco ISD

# Awards - Senior Division

## Animal Sciences

**Swetha Velayutham** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Vyshnavi Poruri** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Henry Rutnam** Beal Bank Second Prize Winner  
Jasper High School | Plano ISD

**Samantha Pupo** Beal Bank Third Prize Winner  
McMillen High School | Plano ISD

## Behavioral and Social Sciences

**Sidhya Peddinti** Grand Prize & Beal Bank First Prize Winner  
American Psychological Association Achievement in Psychological Science  
Winner  
Plano East Senior High School | Plano ISD

**Tanaz Muhamed** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Vivek Kogilathota** Beal Bank Third Prize Winner  
Reedy High School | Frisco ISD

**Meenakshi Subha Vipin** Beal Bank Fourth Prize Winner  
Coppell High School | Coppell ISD

**Emma Sherrer**  
The Cooper Institute Exercise/Health/Nutrition 3<sup>rd</sup> Place Winner  
Coppell High School | Coppell ISD

## Biochemistry

**Noah Mathai** Beal Bank First Prize Winner  
Plano West Senior High School | Plano ISD

**Ashley Zhang** Beal Bank Second Prize Winner  
Jasper High School | Plano ISD

**Sophia Zhang** Beal Bank Second Prize Winner  
Jasper High School | Plano ISD

**Aishani Gupta** Beal Bank Third Prize Winner  
Shepton High School | Plano ISD

## Biomedical and Health Sciences

**Parisa Vaziri** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Anjali Brown** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Natasha Banga** Beal Bank Third Prize Winner  
Coppell High School | Coppell ISD

**Kripa Kannan**  
Dallas County Medical Society 1<sup>st</sup> Place Winner  
McMillen High School | Plano ISD

## Biomedical Engineering

**Vishnu Vasudev** Beal Bank First Prize Winner  
Liberty High School | Frisco ISD

**Aditya Chebrolu** Beal Bank Second Prize Winner  
Independence High School | Frisco ISD

**Rohan Cherukuru** Beal Bank Third Prize Winner  
McKinney Amateur Radio Club, Inc. 1<sup>st</sup> Place Winner  
Directed Energy Professional Society 3<sup>rd</sup> Place Winner  
School of Science & Engineering at Yvonne A. Ewell Townview Center | Dallas  
ISD

**Shivani Jaiganesh**  
Dallas County Medical Society 2<sup>nd</sup> Place Winner  
Jasper High School | Plano ISD

## Cellular and Molecular Biology

**Sophie Royer** Beal Bank First Prize Winner  
Coppell High School | Coppell ISD

**Sneha Nadella** Beal Bank Third Prize Winner  
Plano West Senior High School | Plano ISD

## Chemistry

**Kevin Sun** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Jasper High School | Plano ISD

**Shruthi Madhugiri** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Anjali Iyer** Beal Bank Third Prize Winner  
Jasper High School | Plano ISD

## Computational Biology and Bioinformatics

**Rithvik Ganesh** Beal Bank First Prize Winner  
Southwestern Medical Foundation Kathryn & Ashley H. Priddy Award Winner  
Plano West Senior High School | Plano ISD

**Govardhan Poondi** Beal Bank Second Prize Winner  
Acoustical Society of America Outstanding Acoustic Project Winner  
Plano West Senior High School | Plano ISD

**John Rho** Beal Bank Second Prize Winner  
Acoustical Society of America Outstanding Acoustic Project Winner  
Plano West Senior High School | Plano ISD

**Devika Sunil** Beal Bank Third Prize Winner  
Plano Senior High School | Plano ISD

## Earth and Environmental Sciences

**Sanjana Hiremath** Beal Bank First Prize Winner  
NASA Earth System Science Award Winner  
U.S. Agency for International Development Science Champion Award Winner  
North Texas Chapter of the Texas Master Naturalist Honorable Mention  
Plano East Senior High School | Plano ISD

**Sriya Teerdhala** Beal Bank First Prize Winner  
NASA Earth System Science Award Winner  
U.S. Agency for International Development Science Champion Award Winner  
North Texas Chapter of the Texas Master Naturalist Honorable Mention  
Plano East Senior High School | Plano ISD

**Keshav Chandrasekhara** Beal Bank Second Prize Winner  
Terracon, Inc. Environmental Excellence Award 2<sup>nd</sup> Place Winner  
Uplift North Hills High School | Charter

**Sreya Das** Beal Bank Third Prize Winner  
North Texas Chapter of the Texas Master Naturalist Winner  
Liberty High School | Frisco ISD

**Nawal Siddiqui** Beal Bank Fourth Prize Winner  
Association for Women Geoscientists Student Award for Geoscience Excellence  
The Academy High School | Plano ISD



### **Nicole Ahsan**

North Texas Association of Environmental Professionals Environmental  
Excellence Winner  
Stockholm Junior Water Prize Award for Excellence in a Water-Related Project  
Winner  
WEAT / TAWWA 3<sup>rd</sup> Place Winner  
Plano East Senior High School | Plano ISD

### **Shreya Halbe**

American Industrial Hygiene Association- North Texas Section 1<sup>st</sup> Place Winner  
Jasper High School | Plano ISD

### **Anvita Ukidwe**

Terracon, Inc. Environmental Excellence Award 3<sup>rd</sup> Place Winner  
Coppell High School | Coppell ISD

## Embedded Systems

**Nethra Krishnan** Grand Prize & Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Plano West Senior High School | Plano ISD

**Anushka Sridhar** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Arnold Venter** Beal Bank Third Prize Winner  
National Space Society of North Texas Space Exploration Scholarship 2<sup>nd</sup> Place  
Winner  
Plano West Senior High School | Plano ISD

**Sean Jannati**  
Collins Leadership Association Outstanding Communications Project 1<sup>st</sup> Place  
Winner  
Plano West Senior High School | Plano ISD

**Junhean Jung**  
Collins Leadership Association Outstanding Communications Project 1<sup>st</sup> Place  
Winner  
Plano West Senior High School | Plano ISD

**Ashley Reed**

McKinney Amateur Radio Club, Inc 2<sup>nd</sup> Place Winner  
McMillen High School | Plano ISD

**Ananya Sridhar**

Texas Instruments Best Electronics or Computing Project Winner  
Plano East Senior High | Plano ISD

**Nancy Yan**

DFW Chapter of Hazardous Materials Managers Best Hazardous Materials  
Project 1<sup>st</sup> Place Winner  
Jasper High School | Plano ISD

## Energy: Sustainable Materials and Design

**Greyson Wong** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Williams High School | Plano ISD

**Alysa Zhao** Beal Bank Second Prize Winner  
McMillen High School | Plano ISD

**Lucas Sasaya** Beal Bank Third Prize Winner  
Collins Leadership Association Outstanding Communications Project 3<sup>rd</sup> Place  
Winner  
McMillen High School | Plano ISD

## Engineering Mechanics

**Abhinav Malkoochi** Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Jasper High School | Plano ISD

**Shrey Joshi** Beal Bank Second Prize Winner  
Frisco ISD HS | Frisco ISD

**Ephraim Weiss** Beal Bank Third Prize Winner  
Yavneh Academy of Dallas | Private

**Diya Damadaran**

Terracon, Inc. Engineering Excellence Award 2<sup>nd</sup> Place Winner  
McMillen High School | Plano ISD

**Anushka Hande**

Texas Instruments Best Electronics or Computing Project Winner  
Plano East Senior High School | Plano ISD

**Pranav Nathan**

Collins Leadership Association Outstanding Communications 2<sup>nd</sup> Place Winner  
National Space Society of North Texas Space Exploration Scholarship 1<sup>st</sup> Place Winner  
U.S. Metric Association Best Use of SI Units in a Project Winner  
Plano West Senior High School | Plano ISD

## Environmental Engineering

**Abhinav Bichal** Grand Prize Runner Up & Beal Bank First Prize Winner  
Ricoh Americans Corporation Ricoh Sustainable Development Award Winner  
Lebanon Trail High School | Frisco ISD

**Rohan Chimalapati** Grand Prize Runner Up & Beal Bank First Prize Winner  
Ricoh Americans Corporation Ricoh Sustainable Development Award Winner  
Lebanon Trail High School | Frisco ISD

**Sarvesh Sathish** Grand Prize Runner Up & Beal Bank First Prize Winner  
Ricoh Americans Corporation Ricoh Sustainable Development Award Winner  
Lebanon Trail High School | Frisco ISD

**Mukund Ramachandran** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Nandini Ramachandran** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Rachel Simms** Beal Bank Third Prize Winner  
Plano East Senior High School | Plano ISD

**Otto Beall**

Stockholm Junior Water Prize Award for Excellence in a Water-Related Project  
WEAT / TAWWA 1<sup>st</sup> Place Winner  
Plano East Senior High School | Plano ISD

**Tiffany Chen**

Terracon, Inc. Environmental Excellence Award 1<sup>st</sup> Place Winner  
Clark High School | Plano ISD

**Nathaniel Ha**

Directed Energy Professional Society 1<sup>st</sup> Place Winner  
McMillen High School | Plano ISD

**Mithun Mahesh**

Stockholm Junior Water Prize Award for Excellence in a Water-Related Project  
Winner  
WEAT / TAWWA 2<sup>nd</sup> Place Winner  
Centennial High School | Frisco ISD

**Aadit Walia**

Directed Energy Professional Society 1<sup>st</sup> Place Winner  
McMillen High School | Plano ISD

## Materials Science

**Santosh Gedela** Beal Bank First Prize Winner

ASM Materials Education Foundation Most Outstanding Exhibit in Materials  
Science Award Winner  
Terracon, Inc. Engineering Excellence Award 3<sup>rd</sup> Place Winner  
Plano East Senior High School | Plano ISD

**Aithreya Thoppay** Beal Bank Second Prize Winner

Terracon, Inc. Engineering Excellence Award 1<sup>st</sup> Place Winner  
Jasper High School | Plano ISD

**Diego Porter** Beal Bank Third Prize Winner

McMillen High School | Plano ISD

**Toby Nouanesengsy** Beal Bank Third Prize Winner  
McMillen High School | Plano ISD

## Mathematics

**Ishaan Javali** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Shrey Joshi** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Amitha Mandava** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Abishai Rajan** Beal Bank Third Prize Winner  
American Statistical Association - North Texas Chapter Award for Statistical  
Excellence Winner  
Plano Senior High School | Plano ISD

**Arnav Murthy** Beal Bank Third Prize Winner  
American Statistical Association - North Texas Chapter Award for Statistical  
Excellence Winner  
Plano Senior High School | Plano ISD

**Umangi Singh**  
The Cooper Institute Exercise/Health/Nutrition 2<sup>nd</sup> Place Winner  
MU Alpha Theta Award for Mathematics Award  
Plano East Senior High School | Plano ISD

## Microbiology

**Shriya Bhat** Beal Bank First Prize Winner  
Plano East Senior High School | Plano ISD

**Weixuan Yan** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Harika Regulapati** Beal Bank Third Prize Winner  
Coppell High School | Coppell ISD

## Physics and Astronomy

**Charles Chen** Beal Bank First Prize Winner  
Coppell High School | Coppell ISD

**Aditya Panda** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Dhruv Srivastava** Beal Bank Third Prize Winner  
National Space Society of North Texas Space Exploration Scholarship 3<sup>rd</sup> Place  
Winner  
Plano East Senior High School | Plano ISD

**Prisha Singh** Beal Bank Third Prize Winner  
National Space Society of North Texas Space Exploration Scholarship 3<sup>rd</sup> Place  
Winner  
Plano East Senior High School | Plano ISD

**Lily Maher**  
American Meteorology Society Outstanding Achievement in Atmospheric Science  
Winner  
Shepton High School | Plano ISD

## Plant Sciences

**Zach Vazhekatt** Beal Bank First Prize Winner  
Coppell High School | Coppell ISD

**Laya Kappagantula** Beal Bank Second Prize Winner  
Coppell High School | Coppell ISD

**Mansi Madaik** Beal Bank Third Prize Winner  
Society for In Vitro Biology Outstanding Achievement in In Vitro Biology Winner  
Plano East Senior High School | Plano ISD

## Robotics and Intelligent Machines

**Harshal Bharatia** Grand Prize Runner Up & Beal Bank First Prize Winner  
Office of Naval Research Naval Science Award Winner  
Plano Senior High School | Plano ISD

**Chong Wong** Beal Bank Second Prize Winner  
Plano West Senior High School | Plano ISD

**Adil Husain** Beal Bank Third Prize Winner  
Jasper High School | Plano ISD

**Shivani Ramkumar**  
Directed Energy Professional Society 2<sup>nd</sup> Place Winner  
Plano East Senior High School | Plano ISD

**Ethan Sayre**  
Texas Instruments Best Electronics or Computing Project Winner  
Plano East Senior High School | Plano ISD

## Systems Software

**Navya Ramakrishnan** Beal Bank First Prize Winner  
Plano Senior High School | Plano ISD

**Nehal Singh** Beal Bank Second Prize Winner  
Coppell High School | Coppell ISD

**Aaditya Dhar** Beal Bank Third Prize Winner  
Shepton High School | Plano ISD

**Aditi Kavoor** Beal Bank Fourth Prize Winner  
McMillen High School | Plano ISD

## Translation Medical Science

**Alay Shah** Beal Bank First Prize Winner  
Plano West Senior High School | Plano ISD

**Sameer Parameshwar** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Sridatta Teerdhala** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Venu Poruri** Beal Bank Second Prize Winner  
Plano East Senior High School | Plano ISD

**Eshaan Doke** Beal Bank Third Prize Winner  
Yale Science & Engineering Association, Inc. Most Outstanding 11<sup>th</sup> Grade Exhibit  
Allen High School | Allen ISD

**Hadia Khatri**  
The Cooper Institute Exercise/Health/Nutrition 1<sup>st</sup> Place Winner  
Jasper High School | Plano ISD



## 2021 Special Award Donors

Students receive additional recognition from the following organizations, who provided over 100 Special Awards this year.

Acoustical Society of America  
American Industrial Hygiene Association, North Texas Section  
American Meteorology Society  
American Psychological Association  
American Radio Relay League: McKinney Amateur Radio Club, Inc.  
American Statistical Association  
Association for Women Geoscientist  
ASM Materials Education Foundation  
Collins Leadership Association  
Cooper Institute  
Dallas County Medical Society  
DFW Chapter of Hazardous Materials Managers, Inc.  
Directed Energy Professional Society  
Lemelson Foundation  
Mu Alpha Theta  
National Aeronautics and Space Administration  
National Oceanic and Atmospheric Administration  
National Space Society of North Texas  
North Texas Association of Environmental Professionals  
North Texas Chapter of the Texas Master Naturalist  
Office of Naval Research  
Ricoh  
Society for In Vitro Biology  
Southwestern Medical Foundation, Kathryn & Ashley H. Priddy Award  
State of Texas Chapter of the Health Physics Society  
Stockholm Junior Water Prize  
Terracon Consultants, Inc.  
Texas Instruments  
U.S. Agency for International Development  
U.S. Metric Association  
Water Environment Association of Texas and American Water Work Association  
Yale Science and Engineering Association

## 2021 Teacher Awards

Each day, great science teachers guide, encourage, and motivate students. Teachers impress curiosity in their students, which enables growth and learning. Over 100 teachers enter their students in the Regional Fair.

The Science Fair Teacher Award Committee is recognizing 3 teachers in each division for their dedication and commitment to students. These top teachers were selected by the number, performance, and success rate of their students at the fair.

Southern Methodist University and the DRSEF are proud to honor these teachers.

### Junior Division Teachers

#### **MaryAnn Cowley**

Otto Middle School | Plano ISD

#### **Samantha Tuttle**

Pearson Middle School | Frisco ISD

#### **Melissa VanHouten**

Rice Middle School | Plano ISD

### Senior Division Teachers

#### **Julie Baker**

Plano East Senior High School | Plano ISD

#### **Vashka Desai**

Jasper High School | Plano ISD

#### **Jerry Pruett**

Plano West Senior High School | Plano ISD



# Beal Bank

is proud to salute all participants in the  
64<sup>th</sup> Annual Dallas Regional Science  
and Engineering Fair.

*At Beal Bank we strongly believe that the next generation of scientists will answer long-unanswered questions and produce unprecedented breakthroughs to benefit humankind. Through the Science Fair, we encourage all young scientists to learn to think for themselves, to develop and test their own ideas – and, most importantly, to keep asking questions.*

**Beal Bank**  
Dallas Regional Science  
and Engineering Fair

**DRSEF**

