

Maker Faire MAY 17–19



BAY AREA FRIDAY 1-5PM SAN MATEO COUNTY EVENT CENTER SUNDAY 10AM-6PM

SATURDAY 10AM-7PM



ZONE 1 Mobile makers out and about

★ Solar Surrey

- ***** Stroller Controller
- ★ Robot Dance Party

ZONE 2 The latest in

electronics, 3D printing, digital fabrication plus drones and robots

★ RoboJam

- Mech Warfare
- ★ Museum of **Future Sports Drone Cage**
- ★ Cosplay
- **★** Quick Base Attendee Lounge

 MAKE: ELECTRONICS **BY DIGI-KEY O** DIY CONTENT CREATORS MAKE: FRONTIERS

ZONE 3

Workshops, young makers, maker educators and more

- ★ Young Makers
- ★ Bay Area Lego Users Group
- ★ Kids Craft Activities
- ***** The Exploratorium
- **★** UC Berkeley CITRIS
- **G** GIANT WORKSHOP
- MAKEY'S WORKSHOP

ZONE4

Explorers abound submarines, airplanes, and mechanical horses

- **★** Rearing Horse
- ***** Submarines
- ★ Maker Faire Merchandise
- ★ Make: Bookstore

ZONE 5 Fire arts, glass,

fabrication—and all types of racing cars!



- DIY Robocars
- * Solar Racers
- Power Racing Series
- ★ Maria del Camino
- ***** Woodworking
- ***** Prosthesis
- **★** Fire Arts





ZONE 6

Local artisans and thrilling theatre



- ★ SF Bazaar
- ★ Lacemaking & Cording
- ***** Needle Arts
- TRAVELING SPECTACULAR

ZONE 7

Faire! Dance, big art, keynotes and hands-on activities for all

- ★ Dark Gallery
- ★ Laser Maze
- **★** Spider Sweet
- ★ Myriapodia
- ★ Make: Mini-Shed
- CENTER STAGE
- **O** MAKER SOUARE **BY AMAZON HANDMADE**
- **O** DANCE BATTLE STAGE

★ Tiny Homes **★** Hovercraft **★** Silkscreening HANDS-ON HOMEGROWN

ZONE 9

ZONE 8

with a focus on

skill building

sustainability and

Urban homesteading,

★ Homegrown Village

★ Edible Marketplace

Giant everything! Bubbles, cupcakes, boom boxes

- **★** Acme Muffineering
- ***** Rasterstache
- **★** Box of Boom
- **★** The Playground
- **★** Maker Faire Merchandise
- ★ Make: Mini-Shed



HANDS-ON **EVERYWHERE**



Soldering, lacemaking, circuit building, rocket making, origami there's no place like Maker Faire to pick up new skills as you try your hand at new tools and technologies. Look for the BIG RED HAND signs all over the event identifying ways you can engage with Maker projects, and be sure to stop by the ongoing featured hands-on activities listed below.

ZONE 2

- ★ Raspberry Pi
- ★ Museum of Future Sports
- ★ Bay Area Community Science Labs
- * Foldscope

ZONE 3

- ★ Winged Unicorns
- ★ Giant Workshop
- * Make: Workshops
- ★ LED Plushies
- ★ FabMo

ZONE 4

- * Rockets
- ★ Mobile Maker Van

ZONE 5

- ★ Lower 48 Woodshop
- ***** The Crucible

ZONE 6

- ★ Cording & Lacemaking
- * Needle Arts

ZONE 7

- ***** Learn to Solder by Google
- ★ Learn to Breadboard by Digi-Key

ZONE 8

- ***** Gemstone Polishing
- ★ Hands-on Homegrown
- * Strawbees Hovercraft







MAKERS ON THE FRONTIERS OF THINKING & DOING

Award-winning 3D printed space habitat design; what's important for climate protection; immersive entertainment design; research in community submersibles; AI and machine learning for makers; robotics and food; spontaneous and DIY architecture; so much more!



✿ ADAM SAVAGE founder of Tested.com and Mythbusters **THE SUNDAY SERMON** ★ Zone 5, Sunday, 12pm

See makerfaire.com/ba/schedule for the full schedule of speakers, performances, and workshops.



🗘 GRAHAM HAWKES Ocean engineer

and inventor. Graham has designed and built more than 60 manned submersibles from atmospheric dive suits to flying subs. Currently, he runs HAWX Open Ocean. HACK OCEAN EXPLORATION: IOIN THE DIY UNDERWATER **REVOLUTION WITHOUT GETTING WET ★ Center** Stage, Saturday, 3pm

🗘 MELODIE YASHAR

Co-founder of Space **Exploration Architecture** (SEArch+). In 2015 SEArch+ was awarded top prize in NASA's Phase 1 Centennial Challenge for a 3D-Printed Habitat for "Mars Ice House," and maintains an ongoing collaboration with NASA Langley. **MARS X HOUSE: DESIGNING AND 3D-PRINTING A FUTURE SURFACE HABITAT *** Center Stage,

Saturday, 1pm





🗘 SAUL GRIFFITH Founder and Principal

Scientist at Otherlab, Saul focuses his work on engineering solutions for clean energy, zero carbon economy. He has multiple degrees in materials science and mechanical engineering and completed his PhD in Programmable Assembly and Self Replicating Machines at MIT. 🏓 GREEN **NEW DEAL: THE ENORMOUS OPPORTUNITY IN SHOOTING** FOR THE MOON ★ Center Stage, Saturday, 3:30pm



RIISHNFII CEO of Two Bit Circus. an LA-based

experiential entertainment company that operates a network of micro-amusement parks. Brent is also chairman of the non-profit Two Bit Circus Foundation which deploys STEAM-based programs to inspire students about invention. **>> RAPID PROTOTYPING IMMERSIVE** ENTERTAINMENT ★ Center Stage, Saturday, 5pm



🗘 KYLE CORNFOTH Executive Director of Maker

Ed. Over the last 20 years, Cornforth has trained teachers from all over the world on how non-traditional education experiences are essential to truly prepare students for their lives on this planet. **>> THE STATE OF** MAKER EDUCATION ★ Center Stage, Sunday, 11:30am



😂 CHRIS ANDERSON CEO, 3DR and founder of DIY Robocars,

DIY Drones, and Dronecode. Learn about how makers are using AI, computer vision, and much of the software used in full-size self-driving cars to explore speed, aggressive maneuvering, and race tactics in the real world. **WHY RACE ROBOT CARS**

Center Stage, Sunday 1:30pm



+ ODD JAYY Alex creates IoT projects, tutorials,

and video interviews as the lead Hardware Nerd for the Hackster.io community. Jayy is a self-taught robotics enthusiast and 3D designer from Compton, CA. **MAKE FRIENDS WITH COMPANION ROBOTS**

★ Center Stage, Sunday, 12pm

500+ MAKER FAIRE EXHIBITS

Maker exhibits are the core of Maker Faire. Over 500 makers show and share projects across engineering, art, design, science, food and craft. The creators are alongside their projects, available for questions and exchange.

You'll find surprises and inspiration in new maker tech, startups, small-scale artisan craft, "just for the heck of it" projects, team builds, tools and hacks, research instrumentation, games and toys, sustainable living, fabrication techniques and so much more.

CRAFTS ENCHANTED LEAVES

LET U.S. PREY: This bald eagle by Mr. and Mrs. Ferguson of Alameda, CA is handmade from thousands of nickels, dimes and pennies.

AI &

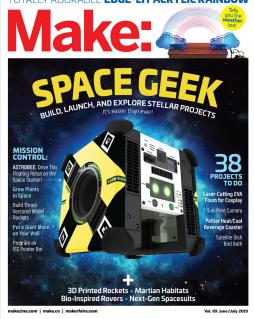
ZOETIC AI is a Bay Area startup showing "Kiki," their

Al-powered pet robot

ROBO

Nedda & Aaron create nature-themed jewelry with organic materials they have gathered in the forests throughout California. They use a creative process called Electroforming, which uses chemistry and electricity to transform their designs into metal.

TOTALLY ADORABLE EDGE-LIT ACRYLIC RAINBOW



SPACE

NASA and Magnitude.io anchor a whole exhibitor section of startups and research institutions working on space at Maker Faire — plus *Make:* Vol 69 launches at #MFBA19 and is all about "makers getting orbital."

SPECTACLE



NEW TECH

M5Stack makes easy, stackable, user-friendly development tools for makers working in IoT, home automation and robotics.

PROSTHESIS is the world's first 100% human controlled, 100% electric powered off-road racing mech. It is a celebration of human skill in unison with high technology and is the flagship machine in a quest to make mech racing a reality. Prosthesis returns to Maker Faire after it's world debut in 2018 at #MFBA18 after a year of work and tweaks by the Furrion Exo-Bionics team. We can't wait to see what it can do!



Image: Find us on: I

@makerfaire #mfba19 #makerfaire

Schedules for speakers, demos and attractions available online at makerfaire.com/ba/schedule

O HOURS

RAIN OR SHINE! Friday, May 17, 1pm–5pm* *separate ticket required for Friday Saturday, May 18, 10am–7pm Sunday, May 19, 10am–6pm

O LOCATION

San Mateo County Event Center, 1346 Saratoga Drive, San Mateo, CA

Cash or credit) Saturday/Sunday Day Pass, On-Site:

- Adults \$50
- Youth & Student \$30 (ages 4–17, or with active student ID at gate)
- Children 3 & under are free Senior/Military/Veterans Discount Military ID or ID required at the gate
- Buy online for best price (before May 17). Additional ticket types available online thru May 20

O PLANNING

ATMs are available on-site. Pets are not allowed, for their safety. Strollers & backpacks are allowed.

O TRANSPORTATION

Information available at makerfaire.com/alt

- Ride your bike, and bring your lock for the bike corral
- Buy Event Center parking in advance at makerfaire.com/alt
- Check **Gfairetraffic** on Twitter for up-to-date parking info Take CalTrain, BART or
- SamTrans—see makerfaire. com/alt
- Uber/Lyft/rideshare drops you conveniently on Saratoga Dr. with access to East Gate

40+WORKSHOPS **DIGGING IN DEEP**

Maker Faire is the place to try new tools, experiment with materials and gain new skills. Our Make: Workshops and the new Giant Workshop in ZONE 3 offer in-depth, hands-on workshops for all ages and across many types of making. Register online in advance to ensure your spot: makerfaire.com/ba/schedule

RESERVATIONS TO WORKSHOPS DO NOT INCLUDE ENTRY TO MAKER FAIRE. MATERIAL FEES MAY APPLY.



See makerfaire.com/ba/schedule for the full schedule of workshops, presentations and performances.

MAKER FAIRE 2019 MERCHANDISE

Visit our Make: Mini-Shed stores for exclusive Maker Faire merchandise, Learn to Solder kits, boards and electronics, Make: books and blinky stuff. Subscribe to Make: magazine, or become a Make: Member and receive a special savings at the event. Look for the Makey robot icons on the map.





knitting! In this workshop, you'll learn to make your own rings and weave them in three different styles including a Byzantine weave, a 2-in-2 pattern, and

a 4-in-1 pattern. ★ Giant Workshop, Saturday, 2pm

🗘 ELECTRIC SUGAR **SKULL PATCHES**

Combine science and art to create a fun personalized sugar skull patch! Sew a circuit with conductive thread, use powerful magnets to make a battery holder and then bring it all together with traditional hand sewing. ***** Make: Workshops, Sunday, 1pm



C LIGHT-UP COSPLAY

Want to make light-up cosplay? Get started using cosplay/EVA foam and a

basic circuit. You'll get the chance to experiment with LEDs, conductive thread, and batteries, and use cosplay foam to make a fun cosplay wrist or arm bracer to take home. **★ Giant Workshop**, Saturday, 12:30pm

NTRO TO MICRO:BIT



color, sound, and weather sensors with enviro:bit from Pimoroni! It's loaded

code using

with sensors for air/weather, color/light, and sound. Plus, it fits right onto your micro:bit. Come spend some time with Digi-Key Electronics and Pimoroni to learn basic block-based coding and leave with a complete kit to impress your friends. * Make: Workshops,

Saturday, 11am

🗘 COCKTAIL/SODA **DISPENSING ROBOT**

Cocktail robotics is a fun and open ended hobby. Make-and take home—a

Raspberry Pi-based drinkbot which can be controlled via a web interface, and can dispense beverages with up to four ingredients. **★ Make:** Workshops, Sunday, 11:30am

🗘 DREAM IT & BUILD IT-SOLIDWORKS APPS FOR KIDS



Introduce children 4-14 to the excitement of imagining and designing

your own creations. Apps for Kids breaks down the design process into bite-sized tools to create, style, design and engineer a concept and then present and share it with

others. *** Make: Workshops,** Saturday, 2:30pm

😂 SCREENPRINTING WITH VINYL



Learn how to make vour screeprint design digital and create your own

DIY screenprinting studio at home with the help of CNC technology. **★ Make:** Workshops, Sunday, 1:30pm

🗘 RE-IMAGINE WIND-UP TOYS



Dissect a wind up toy, observe the parts and how they work together

and use craft materials like cardboard, googly eyes, weights and hot glue guns to create unique scrappy critters. **★ Giant** Workshop, Sunday, 11am





Nine stages plus a multitude of performers that will entertain and inspire. Plan your day at **makerfaire.** com/ba/schedule.





CENTER STAGE * ZONE 7 >> FREE-FLYING SPACE ROBOTS: THE NEXT GENERATION JOSE BENAVIDES Saturday, 12:30pm >> "I FORGOT MY PIN": AN EPIC TALE OF LOSING \$30,000 IN BITCOIN MARK FRAUENFELDER Saturday, 5:30pm >> BIG DREAMS AND

BIG DREAMS AND
SHORTCUTS: HOW I DESIGN
DIY WEARABLE TECH
SOPHY WONG
Sunday, 12:30pm

 MAKE: FRONTIERS

 ZONE 2
 NAVIGATING A POST-TECHSHOP WORLD
 Saturday, 4:30pm
 HOW SELF-DRIVING RC CAR COMMUNITY "DIY ROBOCARS" IS CHANGING THE WORLD
 Saturday, 5:30pm
 COSPLAY PROP CONTEST Sunday, 3pm



C MAKE: ELECTRONICS BY DIGI-KEY ★ ZONE 2 → HOW TO 3D PRINT ON FABRIC & HELPFUL ROBOTICS DAVID SHOREY Saturday, 1:30pm → MAKING ART WITH RASPBERRY PI MATT RICHARDSON Saturday, 3pm → GETTING STARTED WITH SEWABLE ELECTRONICS

ANGELA SHEEHAN Sunday, 3:30pm

DIY CONTENT CREATORS * ZONE 2



THE KING OF RANDOM
 NATE BONHAM & CALI
 GADE Saturday, 11:30am
 GLITTER-BOMBED
 PACKAGE THIEVES & OTHER
 VIRAL VIDEO STORIES
 MARK ROBER
 Saturday, 1:30pm
 STARTING & GROWING

A YOUTUBE CHANNEL! EVAN & KATELYN Saturday, 2:30pm

MAKING IT PODCAST
 BOB CLAGETT, JIMMY
 DIRESTA, DAVID PICCIUTO
 Sunday, 1:30pm
 HOW TO MAKE A SHIPPING
 CONTAINER HOUSE
 BEN UYEDA Sunday, 2:30pm

MAKER SQUARE BY AMAZON HANDMADE * ZONE 6

XOMBUCHA: FROM YOUR KITCHEN TO YOUR COSPLAY AND CLOTHING CHRISTINE KNOBEL Saturday, 12:30 pm BOOKBINDING
 CLEVERHANDS
 Saturday, 11:45 am
 BLOOMING CHEESE!
 MAKING BRIE AND
 CAMEMBERT AT HOME
 NICOLE EASTERDAY
 Sunday, 2:45pm

CHANDS-ON HOMEGROWN ★ ZONE 8



 KOKEDAMA: MAKE YOUR OWN MINI SUCCULENT
 NATALIE HONJO
 Saturday, 12pm
 SAUERKRAUT MAKING
 HAPPY GIRL KITCHEN
 Saturday & Sunday, 2pm
 DIY TEA BLENDING
 CHRISTOPHER
 COCCAGNA Saturday, 5pm & Sunday, 3pm

🗘 GIANT WORKSHOP

★ ZONE 3
 ➡ LIGHT-UP COSPLAY
 ₩ WORKSHOP SAHRYE COHEN
 Saturday, 12:30pm
 ➡ MAKING CHAINMAIL
 ₩ WORKSHOP JASON
 STEPPLER Saturday, 2pm
 ➡ RE-IMAGINE WIND-UP TOYS WORKSHOP
 RYAN JENKINS
 Sunday, 11am



DANCE BATTLE XONE 7

➤ TURFINC, OAKLAND, CA Throughout the day >> TURF DANCE WORKSHOP Friday, 1pm; Saturday & Sunday, 12pm >> LUDOSPORT LIGHT SABER DUELING Saturday & Sunday, 11am & 2pm

TRAVELING SPECTACULAR * ZONE 6

Friday, 2pm & 4pm; Saturday & Sunday, 11:30am, 1:30pm, 4:30pm



C PROSTHESIS * ZONE 5 Friday, 2pm & 4pm; Saturday & Sunday, 11am, 2pm, 5pm

POWER WHEELS RACING * ZONE 5

Friday, 2pm; Saturday, 11am, 1pm, 2pm, 4pm, 5pm; Sunday, 11am, 1pm, 2pm, 4:30pm

SPORTS DRONE CAGE

★ ZONE 2 Sessions alternate all weekend between DRONE TRAINING, DRONE COMBAT, TINY WHOOP RACING & DEMOS

CEPYBIRD'S COKE & MENTOS

★ ZONE 5, WEST GATE Saturday & Sunday, 10am

♥ MARIA DEL CAMINO ★ ZONE 5 Performances on the hour

starting Friday, 1:30pm; Saturday & Sunday, 11:30am

Check **makerfaire.com/ba/ schedule** for full schedule & locations. Subject to change.

»→ makerfaire.com

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