

# ATLAS

High Mobility, Humanoid Robot



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

**Position:** High Mobility, Humanoid Robot

# ATLAS



**Coach:** Marc Raibert

**Hometown:** Boston  
Dynamics

**Stats:** High mobility, humanoid robot designed to negotiate outdoor, rough terrain; Atlas can walk bipedally, leaving the upper limbs free to lift, carry, and manipulate the environment

**Fun Fact:** Atlas uses sensors in its head to avoid obstacles, even when the objects are being moved

# ROBOT **49** ALLSTARS

# BRAAVA JET

Mopping Robot



ROBOT **2017** ALL-STARS

NATIONAL  
**Robotics**  
WEEK

**Position: Mopping Robot**

# BRAAVA JET



**Coach:** Christian Cerda

**Stats:** The Braava jet Mopping Robot tackles dirt and stains in hard-to-reach places, like under kitchen cabinets and around toilets

**Hometown:** iRobot

**Fun Fact:** Attach a cleaning pad and the robot automatically selects wet mopping, damp sweeping, or dry sweeping

# ROBOT **20** ALLSTARS

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# COG

Humanoid



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

# COG



**Coach:** Rodney Brooks

**Hometown:** Massachusetts  
Institute of Technology

**Stats:** A project at the Humanoid Robotics Group of MIT, Cog was based on the hypothesis that human-level intelligence requires gaining experience from interacting with humans, like the way human infants learn

**Fun Fact:** The name doesn't actually stand for anything; it's a play on the term "cognition" and a mechanical cog

# ROBOT **49** ALLSTARS

# GROMI

Mapping Mobile Robot



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

# GROMI



**Coach:** Yong K. Cho

**Stats:** Uses laser scanning, visual sensing, and thermal sensing to provide context-aware, 3D workspace visualization to field robots and remote operators in real time; improves perception and situational awareness

for efficient control and collaboration among robots

**Hometown:** Georgia Tech

**Fun Fact:** The equipped LiDAR sensors can scan objects at a range of 80m and display the point cloud in real time

# ROBOT 49 ALLSTARS



# KURI

Home Companion



ROBOT **2017** ALL-STARS

NATIONAL  
**Robotics**  
WEEK

**Position:** Home Companion

# KURI



**Coach:** Kaijen Hsiao

**Hometown:** Mayfield Robotics

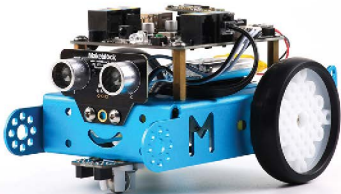
**Stats:** An intelligent robot for the home, Kuri is half a meter tall, weighs just over six kilograms, and is designed with personality, awareness, and mobility that adds a spark of life to any home

**Fun Fact:** Kuri won't talk back; instead it relies on a variety of beepy noises and its expressive head and eyes to communicate

# ROBOT **49** ALLSTARS

# MBOT

Educational Robot



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

Position: Educational Robot

# MBOT



**Coaches:** Lots of cool roboticists

**Stats:** Provides hands-on learning of programming, electronics, and robotics; uses drag-and-drop programming blocks to control the robot

**Hometown:** Makeblock

**Fun Fact:** Can be used in multiple games like a balloon bursting game, soccer playing, sumo, etc.

# ROBOT 49 ALLSTARS

# OCEAN ONE

Bimanual Underwater Humanoid



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

**Position:** Bimanual Underwater Humanoid

# OCEAN ONE



**Coach:** Oussama Khatib

**Stats:** Haptic feedback allows human pilots an unprecedented ability to explore the depths of the oceans in high fidelity

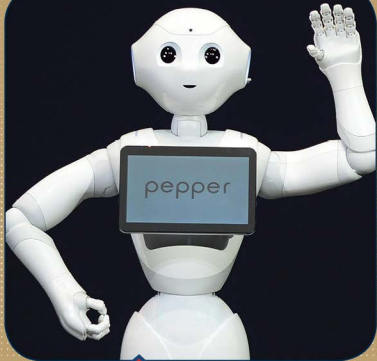
**Hometown:** Stanford University

**Fun Fact:** Its pilot can communicate through hand gestures during complex tasks or scientific experiments

# ROBOT **49** ALLSTARS

# PEPPER

Companion Robot



ROBOT **2017** ALL-STARS

NATIONAL  
**Robotics**  
WEEK

**Position:** Companion Robot

# PEPPER



**Coach:** Masayoshi Son

**Hometown:** Softbank

**Stats:** First robot designed to live with humans; engaging and friendly, it's a companion that communicates with you through an intuitive interface: voice, touch, and emotions

**Fun Fact:** The robot's head has four microphones, two HD cameras (in the mouth and forehead), and a 3-D depth sensor behind the eyes

# ROBOT **2017** ALLSTARS



# ROBOBEEES

Autonomous Flying Microrobots



ROBOT **2017** ALLSTARS

NATIONAL  
**Robotics**  
WEEK

# ROBOBEEES



**Coach:** Donald E. Ingber

**Hometown:** Wyss Institute at Harvard University

**Stats:** Measures about half the size of a paper clip and weighs less than one-tenth of a gram; potential uses include crop pollination, search and rescue missions, surveillance, and environmental monitoring

**Fun Fact:** Flies using “artificial muscles” comprised of materials that contract when a voltage is applied; the 80-mg device has a pair of thin stripped wings that can flap 120

## ROBOT **2017** ALLSTARS

# VALKYRIE

Space Exploration Robot



ROBOT **2017** ALL-STARS

NATIONAL  
**Robotics**  
WEEK

**Position: Space Exploration Robot**

# VALKYRIE



**Coaches:** Johnson Space  
Center Engineering  
Directorate

driving a vehicle, and  
using tools

**Stats:** NASA's R5, AKA  
Valkyrie, has 44 degrees of  
freedom (divided up between  
legs, feet, arms, hands, torso,  
and head) and is capable of  
walking over uneven terrain,

**Hometown:** NASA

**Fun Fact:** These robots will  
start preparing the way for  
humans to explore Mars

# ROBOT **20** ALLSTARS