

KUKA KR210

Georgia
Tech 



Industrial Robot Arm
(and sometimes a pinch hitter)

ROBOT
2015
ALL-STARS

KUKA KR210



Position: Industrial robot arm
(and sometimes a pinch hitter)

Coaches: Henrik Christensen
and Tobias Kunz

Stats: High payload solution for
serious industrial applications;
397 lbs. maximum payload;
weighs 2815 lbs.

Hometown: Cognitive Robotics Lab

Fun Fact: The KR210 is able to hit a
ball at 11 mph. A professional
baseball player can reach up to
90 mph.



To learn more:
robotics.gatech.edu



ROADBOT

Georgia
Tech 



**Automated Crack Sealer
for Roadways**

**ROBOT
2015
ALL-STARS**

ROADBOT



Position: Automated Crack Sealer for Roadways

Coaches: Jonathan Holmes and Colin Usher

Stats: Prototype robotic system developed to fill cracks in roads; system can automatically detect and fill cracks in less than a second while traveling at speeds of 88 inches per second.

Hometown: Aerospace Transportation and Advanced Systems Lab

Fun Fact: Roadbot has difficulty operating in extremely cold temperatures (~20°F) and glued itself to the road once.



To learn more:
robotics.gatech.edu



FANATIC

Georgia
Tech 



**Autonomous
Assembly Station**

**ROBOT
2015
ALL-STARS**

FANATIC



Position: Autonomous Assembly Station

Coach: Stephen Balakirsky

Stats: Automatically builds mixed kits from single part trays; even able to build kits that it has never seen before through the use of an Ontology that contains design information and task primitives.

Hometown: Georgia Tech Research Institute (GTRI)

Fun Fact: Fanatic is utilized as a test bed for the IEEE Robotics and Automation Society's Ontologies for Robotics and Automation standard development.



To learn more:
robotics.gatech.edu



CRICHTON

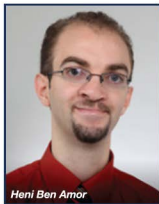
Georgia
Tech 



**Highly Dexterous
Bi-Manual Robot**

**ROBOT
2015
ALL-STARS**

CRICHTON



Heni Ben Amor

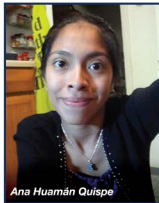
Position: Highly Dexterous Bi-Manual Robot

Coaches: Heni Ben Amor and Ana Huamán Quispe

Stats: Features 2 arms with 7 degrees of freedom each; 3-fingered hands and force torque sensors at wrists; able to perceive the world with a Depth sensor mounted on top of his shoulders.

Hometown: Cognitive Robotics Lab

Fun Fact: Crichton is destined to work alongside human co-workers in manufacturing plants. Recently, he also started to experiment handling a variety of household objects, including soda cans and teddy bears.



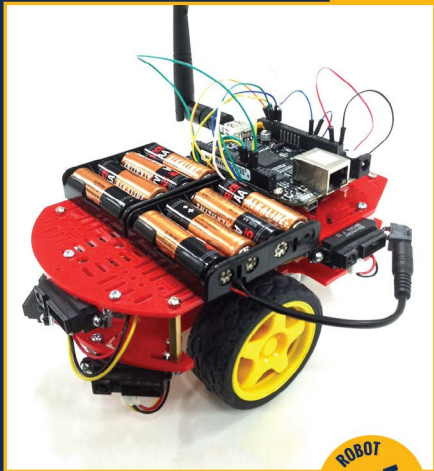
Ana Huamán Quispe

To learn more:
robotics.gatech.edu



QUICKBOT

Georgia
Tech 



**Low-Cost Educational
Mobile Robot**

**ROBOT
2015
ALL-STARS**

QUICKBOT



Rowland O'Flaherty

Position: Low-Cost Educational Mobile Robot

Coaches: Rowland O'Flaherty and Magnus Egerstedt

Stats: Two-wheel differential drive, 2 DC motors, 5 infrared distance sensors and 2 wheel encoder sensors, BeagleBone Black Microcomputer processor, powered by a 12V battery pack.

Hometown: GRITS Lab

Fun Fact: The QuickBot was used in an online robotics course and has thousands of siblings around the world.



Magnus Egerstedt

To learn more:
robotics.gatech.edu



COPYBOT

Georgia
Tech 



Social Engager

**ROBOT
2015
ALL-STARS**

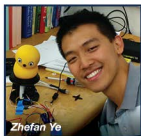
COPYBOT



James M. Rehg

Position: Social Engager

Coaches: James M. Rehg, Zhefan Ye, and Stephanie Tofighi



Zhefan Ye

Stats: Face detection & tracking, eye contact detection, 3 degrees of freedom (pan, tilt, roll).

Hometown: Computational Perception Lab (Georgia Tech), Social Robotics Lab (Yale)



Stephanie Tofighi

Fun Fact: I only have eyes for you, but I prefer brown eyes over blue.

To learn more:
robotics.gatech.edu



EMERGIE



**Emergency Evacuation
Robot Guide**



EMERGIE



Position: Emergency Evacuation Robot Guide

Coaches: Ayanna Howard, Alan Wagner, Paul Robinette



Stats: Built from a Turtlebot 2 base and two Pincher AX-12 arms, this robot can perform several gestures to safely direct panicked evacuees.

Hometown: HumAnS Lab



Fun Fact: Designed using feedback from over one thousand participants in dozens of Internet-based experiments.

To learn more:
robotics.gatech.edu



CHICKENBOT

Georgia
Tech 



**Intelligent Chicken
Deboner**

ROBOT
2015
ALL-STARS

CHICKENBOT



Position: Intelligent Chicken Deboner

Coaches: Ai-Ping Hu, Doug Britton, Gary McMurray



Stats: Able to debone 35 birds/minute.

Hometown: Food Processing Technology Division, ATAS



Fun Fact: An additional 1% in chicken meat yield during deboning can translate to \$1.5 million in additional revenue per plant per year.

To learn more:
robotics.gatech.edu



JEEVES

Georgia
Tech 



**Domestic Service
Robot**

**ROBOT
2015
ALL-STARS**

JEEVES



Position: Domestic Service Robot

Coaches: Henrik Christensen and Carlos Nieto

Stats: Segway RMP, Two Hokuyo utm-30lx-ew, Kinect One, ASUS Xtion PRO Live, Pant-Tilt-Unit, Re05 3D LiDAR Scanner and 6-axis robot arm (UR5).

Hometown: Cognitive Robotics Laboratory

Fun Fact: Jeeves traveled to Singapore and participated in Robocup 2010 as the only US robot in the @Home category.



To learn more:
robotics.gatech.edu



HAPTIC PADDLE CO-ROBOT

Georgia
Tech 



Motion Follower

ROBOT
2015
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HAPTIC PADDLE CO-ROBOT



Position: Motion Follower



Coaches: Jun Ueda, Karen Feigh,
Minoru Shinohara, Antonio Moualeu



Stats: Follows the intended motion of the user safely and smoothly; adjusts its motion based on the operator's arm (muscle) stiffness; it moves faster when the user is relaxed and slows down when they're tense.



Hometown: Biorobotics and Human Modeling Lab

Fun Fact: Requires training based on individual data or averaged data from multiple people, prior to normal operation.

To learn more:
robotics.gatech.edu

