



FOR IMMEDIATE RELEASE

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CONTACT: Rachel Burcin

724-835-4104

rachel@robotwits.com

RobotWits Partners with WQED on *The Robot Doctor*

Robotics series to air on TV during PBS Science Wednesdays in May and June;
also available online

PITTSBURGH –RobotWits and WQED are partnering to provide a weekly television series to extend robotics and mathematics lessons to students who may not have access to the Internet.

The Robot Doctor premieres Wednesday, May 6 at 7:30 pm on WQED-TV, with subsequent episodes airing every Wednesday through June 24. Episodes will be archived online at <http://www.wqed.org/therobotdoctor> and <http://www.robotwits.com/education>.

The limited series will introduce the basics of Robotics: the what, why, and how with examples, and provide take-home problems to solve.

Instruction is geared to a broad audience, including high school students who may not have access to the Internet or to a computer while schools are closed during the Covid-19 crisis.

Each 14-minute teaching module includes a lesson assignment. Participating teachers can use the series to collect the assignments and make *The Robot Doctor* part of their curriculum through the end of the 2020 school year. Each episode of *The Robot Doctor* will be followed by a 14-minute episode of WQED's *iQ: smartparent*, a national television program that helps parents raise children in the digital age.

[RobotWits LLC](#) is providing educators content-related support and partnering with [PA Rural Robotics](#) to assist educators in planning and customizing content to complement their school district, students, and community needs.

The series will be available to all public television stations in Pennsylvania so that the programs can reach rural as well as urban audiences, where Internet access can sometimes be a challenge.

Series program titles and descriptions:

Lesson 101- Robotics: An Introduction

Design elements and how they relate to the purpose of a robot.

Lesson 102 - Sense - Plan - Act Framework

How a robot can break down its tasks into sensing the surroundings, planning what to do next, then executing that plan.

Lesson 103 - Robot Measurements: How do I measure?

Looking at different ways to measure distances, speeds, time, and other items important to robots.

Lesson 104 - Robot Localization: Where am I?

How a robot can keep track of its position as it moves and how to update that position with math using ranges to known landmarks.

Lesson 105 - Robot Motion: How can I move?

How a robot can move around using legs, wheels, or other methods. Also, using math to predict where a robot will be in the future - given a model of the robot and the equations of motion.

Lesson 106 - Robot Vision: How do I see?

How a robot can sense the world around it by using cameras, including how to tell the distance to objects seen by two cameras.

Lesson 107 - Robot Sensing: How do I sense?

How a robot can "see" the things around it without using cameras. Converting polar coordinates to cartesian coordinates in order to make a map.

Lesson 108 - Following a Line

How we can control robots' motors in order to follow a line - including a curved line.

The Robot Doctor is hosted by Dr. Jonathan Butzke, Lead Robotics Researcher at RobotWits LLC, a Pittsburgh-based company that develops state-of-the-art technologies for a diverse set of autonomous decision-making tasks. Dr. Butzke obtained his Ph.D. in Robotics from Carnegie Mellon University where he worked in the Search-Based Planning Lab. His research activities include aerial and ground vehicle coordination, exploration of unknown environments, and the hardware design of numerous robots.

About RobotWits

[RobotWits LLC](http://www.robotwits.com) is a Carnegie Mellon University-spinoff company working on cutting edge technologies in Robotics. In particular, it focuses on developing advanced Planning, Prediction, and Decision-making technologies for self-driving vehicles and other robotic solutions. RobotWits (<http://www.robotwits.com/education>) provides innovative technology and customizable training solutions for industry, government agencies, and educational organizations.

About WQED

WQED was an experiment in educational community-supported television that was the forerunner to PBS. Today, WQED is a multimedia powerhouse that is as much a part of Pittsburgh as the three rivers. WQED is WQED-TV (PBS); WQED World; WQED Create; WQED Showcase; WQED PBS KIDS Channel; Classical WQED-FM 89.3/Pittsburgh; Classical WQED-FM 89.7/Johnstown; the Pittsburgh Concert Channel at WQED-HD2 (89.3-2FM) and online at www.wqed.org/fm; local and national television and radio productions; WQED Interactive (www.wqed.org) and WQED Education (www.wqed.org/edu).

About PA Rural Robotics

The Pennsylvania Rural Robotics (<https://www.paruralroboticsinitiative.com/>) Initiative creates sustainable, world-class educational robotics opportunities for students across the commonwealth. While empowering teachers and creating immersive learning experiences, PA Rural Robotics emphasizes community and equity as it creates pathways for students that will prepare them for 21st-century careers.