

# Laboratory work #1



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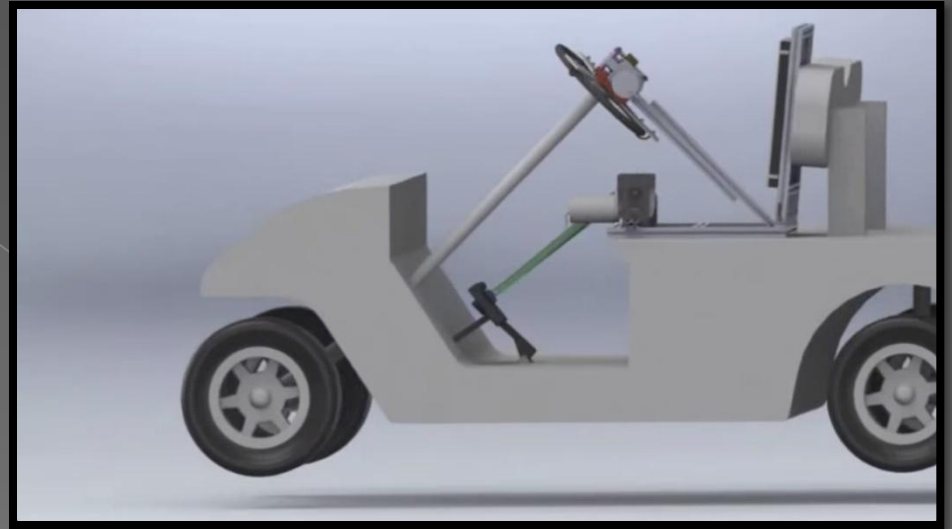
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# A Robot Solution

Yechiel and his team got the idea for IVO when participating in the 2013 DARPA Robotics Challenge. At that event, the goal was to build a humanoid robot that could walk on difficult terrain, climb into a car, drive it, and then get out and operate various tools.

“What we discovered is we human beings have a long way to go before we’ll be able to build impressive robots like Terminator,” Yechiel says.



- After the DARPA challenge, the team spent a year brainstorming and understanding the nuances of robot driving. What are the torques and forces of motion on different steering wheels and pedals? What kind of adaptive control algorithms and neural networks would the robot's brain need? How many cameras would provide a sufficient view of the world?



- The answers to those questions formed the first generation of IVO. The team actually created the software long before building the physical robot over the period of a year and a half.
- “The development of software was tested in a physics simulator, which aided to debug many problems before driving a single inch,” Yechiel says.

# Sony's Adorable Robot Dog



# 5 best robots to serve the family unveiled at CES 2018

- The international Consumer Electronics Show (CES 2018), held last week in Las Vegas, saw the arrival of a new generation of robots for the home which promise to make our life easier. They can assist with housework, accompany the elderly and the children, and even protect the home while the owners are away. Here are the 5 best robots for the family:

# 1. Aeolus Robot

- ◉ This is one of the first household robot assistants. The robot can learn, navigate and complete tasks independently. The robot can use a vacuum or a dry mop to clean floors, and continually adapts to unique home layouts and routines.



## 2. Ubtech Robotics' Walker

- Ubtech Robotics' Walker The robot is designed to provide smart assistance and support across a wide range of people's daily lives. Activated by voice or via a touch screen, it can perform a variety of functions for the home; including smart home control, video surveillance monitoring, security patrol monitoring, motion detection, instant alarm, video calls/conferencing, real time email integration, calendar/schedule management, playing music and videos and dancing.





### 3. Honda's new 3E (Empower, Experience, Empathy) Robotics.



Better known for its ASIMO humanoid robot, Honda unveiled a family of robots under its new 3E (Empower, Experience, Empathy) Robotics Concept, which demonstrates the company's vision of a society where robotics and AI (artificial intelligence) can assist people in a multitude of situations, from disaster recovery and recreation to learning from human interaction to become more helpful and empathetic.

## 4. Buddy by Blue Frog at CES 2018



The fully mobile robot moves with two motorised wheels. With its sensors, cameras, and microphones, the robot is able to hear and speak. The robot can help the family with daily tasks, protect the home, entertain the children, and interact with other smart connected devices in the home

# 5. Sony Aibo

- Probably the oldest and best known robot dog in the world, Sony's Aibo returns this year as the new ERS 1000 model, which the company says will be more like a real dog than ever before. The robot can move along at a total of 22 axes to resemble smooth and natural movements of a dog, with its body language expressed through a combination of voices and eye, ear and tail movements.





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