

I. Introduction by Paweł Boryczka

II. Padova meeting – Motion

- A. France
 - 1. Two wheel robot's movement
- B. Germany
 - 1. Data transfer with Phyphox
 - 2. Damped spring pendulum with Phyphox
 - 3. (Simple) Pendulum
 - 4. Spring pendulum
- C. Italy
 - 1. Motion basic
 - 2. Motion
 - 3. Parabolic Motion
 - 4. Pressure
 - 5. Motion with constant acceleration
- D. Poland
 - 1. Acceleration measurement
 - 2. Optical photo gate – movement and speed measurement
- E. Portugal
 - 1. Free fall

III. Kozenice meeting – Electricity and Environment

- A. France
 - 1. Drive a rover with Python - Regular polygon
 - 2. Drive a rover with Python – Emergency stop
 - 3. Programming an online temperature sensor
 - 4. Programming a microcontroller ESP8266 for measures of temperature and light
- B. Germany
 - 1. Centripetal acceleration
 - 2. Distance measurement
- C. Italy
 - 1. Wireless weather sensor
- D. Poland
 - 1. Data logger
 - 2. DS18B20-energy efficiency measurement
 - 3. Energy changes on an inclined plane
 - 4. Energy changes in the harmonic motion of mass on a spring

5. Introduction to the use of the Pico microcontroller
 6. Resistance and voltage measurement
- E. Portugal
1. Joule experiment revisited

IV. Poitiers meeting – Physics and Environment

- A. Poland
1. Measurement of light intensity
 2. Measurement of humidity and temperature with DHT11
 3. Measurement of pressure
 4. Measurement of soil moisture

V. Fürstfeldbruck meeting – Electricity

A. Germany

1. Comparison of the efficiency of halogen and LED lights
2. Magnetic field coil
3. Study of RC circuit

B. Poland

1. Electric conductivity- Keyboard of fruits and vegetables
2. Skin resistance measurement- GSR
3. Measurement electric power consumption, current measurement

C. Portugal

1. Earth magnetic field
2. Eddy currents
3. Gauss cannon

VI. Povoá de Varzim meeting – Waves

A. Germany

1. Dopplereffect with smartphones
2. Interference with two smartphones
3. Speed of sound

B. Italy

1. Standing wave on string

C. Poland

1. Math and Music
2. Principle of operation of the RFID system
3. Sound level meter
4. Simple harmonic motion with ultrasonic sensor

D. Portugal

1. Estimating the thickness of a hair by light interference