

# The Role of STEM Education in Today's Society: Good Practices at UNIZG-FER

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# What do we want for our society...

- Future for our pupils
  - There is a variety of well-paid jobs in Europe for young professionals with degrees in STEM area
- STEM @primary schools
  - It is important to govern children to STEM topics in early age
- Parents are our partners
  - They encourage children to develop skills in STEM
- Gender differences
  - Recently, girls express more interest for programming than before
- ...and how do we help to achieve these goals @FER...

# ŠUZA

## From Highschool to Science and Academic Community

- The official program of Faculty of Electrical Engineering and Computing for popularization of science and research
- Founded in 2012 by Prof. Mislav Grgić and Dr. Iva Bojić
- Organizing committee: Tomislav Jaguš, Dr. Anamari Nakić, Dr. Ana Sović Kržić
- <http://šuza.fer.hr/>

# ŠUZA – our main activities

1. Organization of workshops for pupils in their schools
2. Organization of workshops for STEM teachers
3. Education of academic staff for presenting research to broad audience
4. Organization of events for popularisation of STEM

# Organizations of workshops in schools

- ŠUZA participates in a scientific project [JOBSTEM](#) fully funded by Croatian Science Foundation
- We organized STEM workshops in 8 primary schools in Zagreb
- In focus: the development of students' self-competence beliefs, their relation with school achievement, and the effect of self-competence beliefs on vocational interests and choices in STEM
- Predrag Pale, Tomislav Jagušć, Juraj Petrović and others from FER
- <http://www.jobstem.eu/>

# Workshops for teachers

- [National meeting of Informatics teachers](#) – FER, January 4, 2016
  - Topics: photo and video editing in FOSS, using Lego Mindstorms robots in informatics classes
  - Organizers: Education and Teacher Training Agency, FER, HrOpen
- Workshop for art teachers – FER, October 17, 2015
  - Topics: programing in Processing and Arduino
  - Lecturer: Dr. Predrag Pale

# Recent events at FER

- [Museum Night @FER](#) – January 29, 2016 ([video](#) – XV gimnazija)
  - National cultural event
  - Exposition of old computers, open for general public, over 2000 visitors
- [Hour of Code @FER](#) – December 12, 2015
  - Global movement for promotion of programming
  - Programming workshops for pupils, 150 pupils, age 5 - 18
- [Evenings of Mathematics @FER](#) - December 3, 2015
  - Popular lectures on selected topics in mathematics, 150 pupils, age 14 - 17
- [Open Doors @FER](#), November 14, 2015
  - Exhibition of our research projects, organized visits to laboratories of FER
- ...and many others... @suza.fer.hr

# Our partners

- Student organisations
  - Istraživački centar mladih
  - eSTUDENT
  - KSET
- Professional associations
  - Croatian Robotics Association
  - RADDAR
  - Bistrići
- Our academic staff



# Our principles

- All events are free of charge
- Organizers are volunteers
- We nurture open doors policy - everyone is welcome!
- We are open for new ideas for STEM popularisation
- We provide support to all events organized by our academic staff
- STEM is fun!