

Come to Latvia and engineer a  
**nonlinearlife**

SUMMER  
SCHOOL



RIGA TECHNICAL  
UNIVERSITY

**Edition 2**

August 12–24 2018 Riga Latvia

## Contacts:

International Relations Department of RTU will be happy to answer all **questions concerning organizational and content related matters**, which might occur before the summer school starts or during its course.

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[rtu.lv/en/nonlinearlife](http://rtu.lv/en/nonlinearlife)

## Application:

The deadline for submitting the application is

**May 7, 2018**

Please enclose the following documents in English:

- Application form: [rtu.lv/en/nonlinearlife](http://rtu.lv/en/nonlinearlife)
- Curriculum Vitae
- Letter of motivation (1 page)

## About

# The

Nonlinear life school organized in 2017 was successful particularly due to converging sciences approach employed to

deliver knowledge. The participants from Belgium, France, Germany, Italy, Latvia, Lithuania, the Netherlands, Poland and Russia covered a wide range of topics – virtual and augmented reality for medicine, medical physics in oncology, the use of smart textiles in motion capture, new generation biomedical fibres and their production technologies, the use of artificial intelligence in medical physics research, chaos and orderliness, structural biology, nanotechnology, big data in health and other topical engineering themes related to human life.

In 2018, the professors from the Czech Republic, Germany, Israel, Italy, Latvia, Lithuania, Poland, Spain, Turkey, and the USA will deliver the lectures, share the experience and offer the topics for the converged sciences projects to be developed by the students during the summer school.

**The scientific program of the School 2018 will include the following fields:**

- Fusion of radiology, cardiology, medical engineering and physics
- Formalization of the nonlinear phenomena
- Structural biology and genetics
- Nanotechnologies and nanomaterials
- Nanomedicine
- Biomaterials
- Surface phenomena
- Nonlinear optical and electrical processes by/for bio-objects

You will visit advanced health care institutions that serve to health, for example, **the Oncology Centre of Latvia** as well as enterprises like **Baltic Scientific Instruments** (specialized in the development and production of devices for spectrometric analysis based on semiconductor and scintillation radiation detectors) and **Riga Nuclear Medicine Centre** (nuclear medicine research laboratory, which is providing research and commercial research services).

## Host

**The summer school "Nonlinear Life" is organized by the Institute of Biomedical Engineering and Nanotechnologies of the Faculty of Mechanical Engineering, Transport and Aeronautics in cooperation with International Relations Department of Riga Technical University (RTU).**

The Institute has a lot of experience with participation in and coordination of national and international research and educational projects, as well as international conferences for both scientists and students.

It has a worldwide cooperation in research and education as well as a leader position in medical physics and engineering education in the Baltic region. The research done by the Institute focuses on nanotechnologies, surface phenomena, smart textile and biotextile, nanodosimetry towards medical applications.

# non linearlife



## Your profile

### + Education background

- Undergraduate student (finished at least one year of studies by the time the summer school starts)
- Postgraduate student
- Doctoral student

### + You are familiar with

- Mathematical calculus
- General physics
- Basics of computing technologies

### + Your abilities

- Speak fluent English
- Appreciate the experience of learning from and working with qualified professionals
- You are a creative person
- Looking for added value content

## Study credits

Certificates of Further Education of Riga Technical University and 3 ECTS (European Credit Transfer System) credit points will be awarded upon completion of the program.

## Participation fee

The participation fee covering registration, tuition, accommodation in the student hostel of RTU, meals (breakfast and lunch) and the social program is **EUR 700**. The participants will have to cover their travel expenses and health insurance. Based on the evaluation of the application documents, participant with the most outstanding results will receive a discount for covering participation fee.