

# SUMMER PROGRAM!

**What:** Internships / Work Placement

**When:** May 2020 – August 2020

**Duration:** 2 months (minimum)

**Funding:** €900 per month + Travel

**Who:** Undergraduate and Postgraduate students

**Documents:** CV and Transcript of records

**Deadline:** March, 5 2020

**Contact:** International Academic Cooperation Department, Elena Serova - e.serova@spbu.ru

## Project titles

### **Materials and Surface Engineering; Automotive Systems Engineering; Mechanical and Energy Systems Engineering:**

1. Automotive Engineering - Brake Noise Vibration & Harshness (NVH) Experiments & Analysis
- 2- Multi-vector Energy Systems Planning and Operation with High Penetration of Renewable Energy Sources
- 3-Energy Management of Hybrid AC/DC Microgrids
- 4- In Situ surface hardening of Ti-6Al-4V coated with Ni/Al<sub>2</sub>O<sub>3</sub> nano-crystalline coating using TIG welding
- 5- Corrosion performance of Zn coated EN24 steel in the presence of nitric acid
- 6- Dissimilar joining of Al<sub>2</sub>O<sub>3</sub> to magnesium AZ31.
- 7- Performance characterization of spin coated nano-reinforce coatings containing TiO<sub>2</sub> or graphene oxide
- 8- Control of Mechanical and Physical Properties of Seeded Granules and Tablets

### **Engineering and Informatics**

- UoB1. Automotive Engineering Big Data Analytics and Machine Learning Applications
- UoB2. Big Data 3D Visualisation using Virtual Reality and Data Augmentation
- UoB3. Responsible Artificial Intelligence: ethics, efficiency, explainability metrics for AI tools
- UoB4. Mind Power: EPOC+ driven mobile applications
- UoB5. AAA Transport/Aviation Logistics Using Mobile and Big Data Applications
- UoB6. Smart City mobile device applications
- UoB7. Intelligent Network Services

### **Live Science**

1. Personalized medicine, Machine learning, Genomics & Skin Disorders
2. The laterality and refractive associations of amblyopia (lazy eye)
3. The genetic and environmental factors associated with amblyopia development
4. Analysis of the glucose response in skin and hair cells
5. Assessment of thermomechanical behaviour of polymeric patches for buccal drug delivery system