

# VASIL YORDANOV

## Université Paris-Saclay

@ vasil.r.yordanov@gmail.com

● Art of Problem Solving [account](#)

✉ 11 Allée des Planches, B

git [GIT Repository](#)

📍 Orsay, France

☎ +33 656 832839

## ACHIEVEMENTS

---

- Week of Olympiad Mathematics, Jan 2017  
**3rd Award**  
*Institute of Mathematics and Informatics, Bulgarian Academy of Sciences*
- 10th Fall Mathematical Tournament, Nov 2016  
**4th Place**  
*Bulgarian Academy of Sciences*
- 7th International Festival of Young Mathematicians, Sep 2016  
**2nd Team Place (captain)**  
*Institute of Mathematics and Informatics, Bulgarian Academy of Sciences*
- Spring Mathematical Tournament, Apr 2016  
**4th Place**  
*Bulgarian Academy of Sciences*
- 9th Fall Mathematical Tournament, Nov 2015  
**1st Place**  
*Bulgarian Academy of Sciences*
- 2nd Iranian Geometry Olympiad, Sep 2015  
**Silver Medal**  
*Bulgarian Academy of Sciences*
- Australian Mathematics Competition, Aug 2015  
**Distinction (top 5%)**  
AMC
- International Mathematics Olympiad 2017- part of extended Bulgarian Team (top 12 in nation)

## RESEARCH

---

- Two month research internship on the topic of gauge fields, under the supervision of Dr. Nikolay Nikolav and Dr. Dimitar Mladenov. Covered topics- advanced linear algebra (*Linear Algebra and Geometry, Konstrikin, Manin*) and introduction to Differential Geometry (*Lectures on Differential Geometry, Shlomo Sternberg*)  
May, 2020 - July, 2020

## EDUCATION

---

L3/Magistère1 Physique  
Fondamentale

**Université Paris-Saclay, Erasmus**

📅 Sep 2020 - Currently

B.Sc (Honors)  
Physics/Mathematics

**University of Glasgow**

📅 Sep 2018 - 2022

High School- Diploma  
5.93/6.00

**Sofia High School of Mathematics (SMG)**

📅 Sep 2013 - May 2018

## ABOUT ME

---

- Love working under pressure
- Multi-source approach to learning theory and concepts
- Flexibility in learning independently and in a well organised, driven group of peers
- Strong sense of belonging and desire to improve within a problem-solving community
- Self critical and taking keen interest in the opinions and differing approaches of colleagues

## LANGUAGES

---

- Bulgarian (Fluent)
- English (Fluent)
- French (A2)

## PROJECTS

---

### Basketball Lighting System

- A full stack developed open source lighting system for a basketball court in Greece, deployed in 2017. The project utilised the Espressif ESP8266 controller, which was used for lamp control, as well as group assignment. For power fail safety, the on-board flash memory was used, so that lamps remained in their assigned groups. Dimming was implemented using the IRL540 Transistor. The communication protocol used was MQTT, for its QoS data delivery, as well as its simplicity. For the UI, a mobile-friendly web app was developed with Flask.

### School Math Competition

- Organised, submitted and graded problems for a math competition in Sofia High School of Mathematics along with two classmates. The competition was attended by 99 teams consisting of 4-6 people, divided into two difficulty groups, each with 9 problems. The solutions were reviewed and graded in one day, with the winners announced on the day after the competition.

### Smart Street Lighting

- Helped in the development of a street lighting project for the city of Silistra, Bulgaria. The system controls the street lighting in the whole city, and collects telemetry via electricity meters in lamps. The project architecture is designed to treat millions of events per second, and the data is stored in a PostgreSQL database, analysed both real-time and persisted using the WSO2 Data Analytics Server, aggregated and displayed on a Grafana Dashboard.

## TECHNICAL SKILLS

---

- Latex, GeoGebra, Python (pandas, scipy, Flask, matplotlib), C++, C (Embedded), Bash, PostgreSQL, JavaScript
- GNU/Linux, Promox Virtual Environment, GIT

## HOBBIES

---

- Horse Riding
- Indoor Bouldering

## VOLUNTEERING

---

- Nightline, Sep 2018 - Jan 2019
- WorldSummitAI, Amsterdam, 11-12 Oct 2017
- Glasgow Uni Documentary Society, 2018 - 2019
- Peer-to-peer math lectures at high school

## PROGRAMS

---

- Romanian Masters in Mathematics (RMM) and Balkan Mathematics Olympiad (BMO) preparation  
2 weeks, January 2017
- Romanian Masters in Mathematics (RMM) and Balkan Mathematics Olympiad (BMO) preparation  
2 weeks, January 2016
- International Mathematics Olympiad Summer Camp  
4 weeks, June 2016

## COURSES AND LITERATURE

---

- **Differential Calculus (Analysis)** (5 ed. 1971) by Prof Yaroslav Tagamlitzki
- **Integral Calculus (Analysis)** (6 ed. 1978) by Prof Yaroslav Tagamlitzki
- **Quantum Mechanics I** by mit.ocw, Spring 2013, by Prof. Allan Adams, Prof. Matthew Evans, Prof. Barton Zwiebach
- **Electricity and Magnetism** by mit.ocw, Spring 2002, by Prof. Walter Lewin
- **The Theoretical Minimum** by Prof. Leonard Susskind
- **The American Mathematical Monthly and The College Mathematics Journal** by Mathematical Association of America
- **Special Relativity Lectures** by Prof Leonard Susskind  
Spring, 2008
- **Linear Algebra and Geometry** by Alexei Konstrikin, Yu Manin

## CERTIFICATES

---

- IETLS, May 2018, Score : **8.5**
- TOEFL, Dec 2017, Score: **105**
- SAT, Oct 2017, Score: **1540**
- SAT MATH 2, Jun 2017, Score: **800**  
SAT PHYSICS, Jun 2017, Score: **750**