

# CURRICULUM VITAE

## 1. PERSONAL DATA

**Surname:** DUMITRACHE  
**First name:** Ciprian  
**Date/Place of Birth:** 12 September 1987 / Buzau, Romania  
**Nationality:** Romanian  
**Gender:** Male  
**Languages:** English (level C1)  
French (level B2)  
Romanian (native language)

**Office:** National Institute for Laser, Plasma and Radiation Physics (INFLPR)  
Laboratory of Solid-State Quantum Electronics  
409 Atomistilor Str., P.O. Box MG-36, Magurele 077125, Ilfov, Romania  
FAX: +40 - 21 457-4243  
Phone: +40 - 21 457-4550, ext. 2125  
Email: [ciprian.dumitrache@inflpr.ro](mailto:ciprian.dumitrache@inflpr.ro)  
Web: <http://www.inflpr.ro>, <http://ecs.inflpr.ro>  
**Researcher ID:** AAC-5494-2020  
<https://publons.com/researcher/3355553/ciprian-dumitrache/>  
**ORCID:** 0000-0002-4801-3447

## 2. EDUCATION AND TRAINING

### **PhD in Mechanical Engineering**

**Dates / Institution:** Jan. 2013 - Dec. 2017 / Colorado State University, Fort Collins, USA  
**Title of the Thesis:** "Novel Laser Ignition Technique using Dual-Pulse Pre-Ionization"  
**Specialization:** Combustion, Plasma and Laser Spectroscopy

### **MSc in Aerospace Engineering**

**Dates / Institution:** Aug. 2011 - Dec. 2012 / Georgia Institute of Technology, Atlanta, USA  
**Specialization:** Combustion

### **BSc in Aerospace Engineering**

**Dates / Institution:** Oct. 2006 - Jun. 2010 / University "Politehnica" Bucharest, Bucharest, Romania  
**Title of the Thesis:** "Performance Prediction of an Air-augmented Liquid Rocket Engine"  
**Specialization:** Aerospace Propulsion Systems

### **Post PhD Scholarships**

**B.** Fellow at École CentraleSupélec, University Paris Saclay, Gif-sur-Yvette, France  
**Period:** 01 Jan. 2018 - 31 Dec. 2019  
**Research theme:** "Development of fs-TALIF diagnostic for measurements of ground state atomic nitrogen in nanosecond repetitively pulsed discharges"  
**Institution:** Laboratoire EM2C, CNRS UPR 288, Ecole CentraleSupélec, Gif-sur-Yvette, France

A. Fellow at Center for Laser Sensing and Diagnostics, Colorado State University, USA  
Period: 1 Sept. 2017 - 31 Dec. 2017  
Research theme: "On the Use of REMPI pre-ionization for Laser Plasma Formation"  
Institution: Center for Laser Sensing and Diagnostics, Colorado State University, USA

### **3. WORK EXPERIENCE**

#### **National Institute for Laser, Plasma and Radiation Physics**

Laboratory of Solid-State Quantum Electronics  
409 Atomistilor Str., Magurele 077125, Ilfov, Romania

Period / Position:

Jan. 2020 - present Senior Scientific Researcher, 3rd rank

#### **École CentraleSupélec, Laboratoire EM2C, CNRS UPR 288**

École CentraleSupélec, Batiment EIFFEL, 8-10 rue Joliot Curie, 91190 Gif-sur-Yvette

Period / Position:

01 Jan. 2018 - 31 Dec. 2019 Post-doctoral period

#### **Center for Laser Sensing and Diagnostics**

Colorado State University, Powerhouse Energy Campus, 430 N. College Ave., 80524, Fort Collins

Period / Position:

01 Sept. 2017 - 31 Dec. 2017	Post-doctoral period
01 Jan. 2013 - 31 Aug. 2017	Graduate research assistant
01 May 2016 - 30 Aug. 2016	Course Instructor (MECH 342: Mechanics and Thermodynamics of Flow Process)
01 Jan. 2014 - 30 May 2014	Graduate teaching assistant (MECH 301: Engineering Design III)

#### **"Ben T. Zinn" Combustion Laboratory**

Georgia Institute of Technology, 635 Strong St, Atlanta, GA 30318

Period / Position:

01 May. 2012 - 31 Dec. 2012 Graduate research assistant

### **4. PUBLICATIONS**

Peer-review journals: 7

Contributed talks at

- International Conferences: 23 of which 18 were published (more than 3 pages) in conference proceedings

Patents: 1 (United States Patent and Trademark Office)

### **5. RESEARCH INTERESTS**

- Plasma-assisted combustion;
- Laser ignition;
- Advanced optical diagnostics;
- Computational Fluid Dynamics (CFD);
- Plasma kinetics;
- Combustion.

## **6. MISCELLANEOUS**

**Reviewer:** Journal of Quantitative Spectroscopy and Radiative Transfer

**Awards:**

- Best Paper Award: "Dual-Pulse Laser Ignition Using Oxygen REMPI Pre-ionization," authors: C. Butte, **C. Dumitrache**, A. Yalin, Awarded by American Institute of Aeronautics and Astronautics (AIAA) at Aviation 2019, section: "Plasmadynamics and Lasers (PDL)".
- "The 2016 Departmental PhD Teaching Fellowship" by the Mechanical Engineering Department at Colorado State University. The fellowship supports a PhD student interested in a mentored teaching experience in preparation for pursuing academic faculty position. (only 2 fellowships awarded each year).
- CSU Ventures-Drivers of Innovation Award. The Drivers of Innovation Awards highlight the leading edge of the most innovative research originating from CSU. Topic: "Towards Laser Ignition by Rapid Heating of Water Vapor".
- "Gordon C. Oates Air Breathing Propulsion Award" by the American Institute of Aeronautics and Astronautics. Award recognizes a graduate student doing excellent research in the air and space sciences.
- "Fulbright Junior Award" by the Fulbright Program (US Dept. of State). 9-month grant offered by the Fulbright Program for international student exchange covering tuition and living expense for attending graduate school.

**Membership:**

- American Institute of Aeronautics and Astronautics (AIAA)
- The Combustion Institute (CI)
- The Fulbright Alumni program