

# Filip Živanović

School of Mathematics, University of Edinburgh, Edinburgh, EH9 3FD, UK

+44 0131 651 7112 (*work*)  $\diamond$  f.zivanovic@ed.ac.uk

## EMPLOYMENT

---

### University of Edinburgh

2020 - 2023

Postdoctoral Research Associate

ERC grant *Homological mirror symmetry, Hodge theory, and symplectic topology*

PI: Dr Nick Sheridan

## EDUCATION

---

### University of Oxford

2016 - 2021

DPhil. in Mathematics

Advisors: Prof. Alexander F. Ritter, Prof. Kevin R. McGerty

Thesis title: “*Symplectic Geometry of Conical Symplectic Resolutions*”

Examining committee: Prof. Dominic D. Joyce FRS, Prof. Ivan Smith

### University of Belgrade

2015 - 2016

Master in Mathematics

GPA: 10/10

Advisor: Prof. Darko Milinković

Thesis title: “*Symplectic capacities*”

Examining committee: Prof. Miodrag Mateljević, Prof. Darko Milinković, Dr Jelena Katić, Dr Miljan Knežević

### University of Belgrade

2011 - 2015

Bachelor in Mathematics

GPA: 9.98/10

### Mathematical Grammar School

2007 - 2011

High School

GPA: 5/5, Valedictorian

## ACADEMIC INTERESTS

---

**Field of Research:** Symplectic geometry; Geometric representation theory.

**Interests:** Floer theory, Fukaya categories, Microlocal sheaves;

Springer theory, Quiver varieties, Conical symplectic resolutions, Moduli spaces of Higgs bundles.

## PAPERS AND PREPRINTS

---

*Exact Lagrangians in Conical Symplectic Resolutions.* To appear soon.

*Symplectic Cohomology of Conical Symplectic Resolutions,* joint with Alexander Ritter. To appear soon.

## AWARDS AND SCHOLARSHIPS

---

*Ursell Award, Oxford University* Full Scholarship

2016-2020

*Alan Tayler* Scholarship, St Catherine’s College, **Oxford University**

2017-2019

*Ivan D Jankovic, Cambridge University* Full Scholarship, offered

2016

*Dulverton Scholarship, Oxford University* Full Scholarship, shortlisted

2016

Fund for Young talents of the Republic of Serbia award for postgraduate students

2016,2018,2019

Belgrade City Scholarship

2009-2010,2015-2016

Scholarship of the Ministry of Science and Education of the Republic of Serbia

2010-2015

Faculty of Mathematics, University of Belgrade *Award of Excellence*

2013,2014,2015,2016

*Gold Medal* at 7th International mathematical SEEMOUS student competition, Greece

2013

Crown prince Alexander’s *Award of Excellence*

2011

Mathematical Grammar School **Valedictorian**

2011

*Vuk Karadžić* Diploma for perfect high school grades

2011

## SEMINAR TALKS

---

Geometry & Physics seminar, Northwestern University, <i>Symplectic Geometry of Conical Symplectic Resolutions</i>	2021
Hodge Seminar, Edinburgh, <i>Symplectic Geometry of Conical Symplectic Resolutions</i>	2020
Junior Geometry and Topology seminar, Oxford, <i>Quiver varieties and Kac-Moody algebras</i>	2020
Geometry and analysis seminar, Oxford, <i>Symplectic geometry of Conical Symplectic Resolutions</i>	2020
Mathematical Institute seminar, Serbian Academy of Sciences and Arts, Belgrade, <i>Springer Theory</i>	2019
Junior Geometry and Topology seminar, Oxford, <i>A biased view of two-row Springer Theory</i>	2019
Junior Geometry and Topology seminar, Oxford, <i>A biased view of Geometric Representation Theory</i>	2019
Symplectic cut, London, <i>Introduction to quiver varieties</i>	2019
Junior Geometry and Topology seminar, Oxford, <i>Smooth Lagrangians in conical symplectic resolutions</i>	2018
Junior Geometry and Topology seminar, Oxford, <i>Symplectic cohomology and its (non)vanishing</i>	2018
Junior Geometry and Topology seminar, Oxford, <i>Symplectic cohomology revisited</i>	2018
Symplectic Geometry seminar, University of Belgrade, <i>Symplectic cohomology of quiver varieties vol.2</i>	2018
Junior Geometry and Topology seminar, Oxford, <i>Quiver varieties revisited</i>	2017
Symplectic Geometry seminar, University of Belgrade, <i>Symplectic cohomology of quiver varieties</i>	2017
Junior Geometry and Topology seminar, Oxford, <i>Symplectic cohomology of quiver varieties</i>	2017

## CONFERENCES AND WORKSHOPS

---

The unity of mathematics: A conference in honour of Sir Michael Atiyah, Cambridge	2021
Workshop on Symplectic Topology, Belgrade. <b>Contributed a talk</b>	2021
Qolloquium: A Conference on Quivers, Representations, and Resolutions, Web Conference. <b>Contributed a talk</b>	2020
XIV Workshop on Symplectic Geometry, Contact Geometry, and Interactions, Antwerpen	2020
Geometry and Analysis: celebrating the mathematics of Pierre Pansu, Oxford	2019
Geometry and Strings, Oxford	2019
Workshop on Symplectic Topology, Belgrade. <b>Contributed a talk</b>	2019
Categorical Symplectic Topology Conference, Cambridge	2019
XIII Workshop on Symplectic Geometry, Contact Geometry, and Interactions, Berlin	2019
Current trends on spectral data for Higgs bundles IV, Oxford	2018
20th Anniversary Conference of the Clay Mathematics Institute, Oxford	2018
Workshop on Symplectic topology, Belgrade. <b>Contributed a talk</b>	2018
British Isles Graduate Workshop II: Singularities and Symplectic Topology, Jersey. <b>Contributed a talk</b>	2018
Summer School on Geometric Representation Theory, Vienna	2018
Floer lectures 2018, Bochum	2018
XXV Gökova Geometry/Topology Conference, Gökova, Turkey	2018
XII Workshop on Symplectic Geometry, Contact Geometry, and Interactions, Uppsala	2018
Graduate school on Modern Moduli Theory, Oxford	2017
Symplectic geometry - celebrating the work of Simon Donaldson, Cambridge	2017
RET Summer School on Distributions and H-Principles, Barcelona	2017
XI Workshop on Symplectic Geometry, Contact Geometry, and Interactions, Nantes	2017
Singularities, Symmetries & Submanifolds, UCL London	2017
Workshop on Symplectic Field Theory VIII, Humboldt University, Berlin	2016
3-manifolds and Floer Theories, University of Regensburg	2016
Summer school on symplectic topology, sheaves and mirror symmetry, Paris	2016
X Workshop on Symplectic Geometry, Contact Geometry, and Interactions, Augsburg	2016
Flexibility and contact geometry, Universite Libre de Bruxelles	2015
6th Symposium "Mathematics and Applications", Belgrade. <b>Contributed a talk.</b>	2015
3rd Heidelberg Laureate Forum, Heidelberg	2015
PCMI Summer School on Geometry of moduli spaces and representation theory, Utah	2015
National conference of Astronomers of Serbia, Belgrade. <b>Contributed a poster.</b>	2014
Summer School on Particle Physics, Petnica Science Center	2014
Visiting CERN with IAPS (International association of physics students), CERN	2014

Summer School on Cosmology, Petnica Science Center

2013

Petnica Science Center 8th and 9th annual conference. **Contributed a poster presentation.**

2009, 2010

International Mathematical Tournament of Towns Summer Conference, Moscow

2008

## ORGANIZATIONAL EXPERIENCE

---

Junior Geometry and Topology seminar organizer, Mathematical institute, University of Oxford	2017-2019
External organizer, Workshop on Symplectic topology, Belgrade	2018

## TEACHING EXPERIENCE

---

<b>Retained Lecturer in Mathematics</b> , Jesus College, University of Oxford	2019 - 2020
Tutor on 1 <sup>st</sup> and 2 <sup>nd</sup> year courses and Undergraduate Admissions Interviewer	
<b>Class tutor</b> , Mathematical Institute, University of Oxford	2018 - 2019
Third year course on <i>Geometry of Surfaces</i>	
<b>Teaching assistant</b> , Mathematical Institute, University of Oxford	2016 - 2018
Third year course on <i>Algebraic Curves</i> and Fourth year course on <i>Algebraic Topology</i>	
<b>Teaching assistant</b> , University of Belgrade, Serbia	2015 - 2016
First year course <i>Analysis 1</i> and second year course <i>Analysis 3</i>	
<b>Senior Associate</b> , Petnica Science Centre, Serbia	2015 - present
Giving talks on mathematics to high school students	
<b>Teaching assistant</b> , Petnica Science Centre, Serbia	2011 - 2015
Teaching topics in mathematics to high school students and helping with their research projects	
<b>Class Tutor</b> , Mathematical Grammar School, Belgrade	
Preparing high school students for astronomy and astrophysics competitions	2012 - 2015
Preparing elementary school students for mathematical competitions	2009 - 2010

## MEMBERSHIPS

---

The Oxford Union	life member
European Mathematical Society	2017-Present
Junior Member of the Isaac Newton Institute	2017-Present
London Mathematical Society	2017-Present
National Olympic Committee of Astronomers of Serbia	2015-Present

## INTERNATIONAL COMPETITIONS (HIGH SCHOOL)

---

### Mathematics

First Prize at Kolmogorov School Mathematical Competition, Moscow	2010
Gold Medal at 4th International Mathematical "ARHIMEDE" Contest, Bucharest	2010
Gold Medal at 3th International Mathematical "ARHIMEDE" Contest, Bucharest	2009
Bronze Medal at 28th Balkan Mathematical Olympiad, Romania	2011
Silver Medal at 26th Balkan Mathematical Olympiad, Serbia	2009

### Astronomy

Bronze Medal at 5th International Olympiad in Astronomy and Astrophysics, Poland	2011
Silver Medal at 4th International Olympiad in Astronomy and Astrophysics, China	2010
Silver Medal at 3rd International Olympiad in Astronomy and Astrophysics, Iran	2009
Silver Medal at 13th International Astronomy Olympiad, Italy	2008
Gold Medal at 12th International Astronomy Olympiad, Crimea	2007

## PUBLICATIONS (ASTROPHYSICS)

---

S. Vidojević, S. Ninković, S. Andjelković, V. Sarković, F. Živanović, B. Simonović, S. Badža: <i>Participation of Serbia at the International Olympiads in Astronomy and Astrophysics in 2012 and 2013;</i> Proceedings of the XVII National Conference of Astronomers of Serbia, p. 471 - 474.	2016
V. Šarković, F. Živanović: <i>Modeling inflation using a modified general theory of relativity;</i> Petnica Science Center selected students' papers 2010, p. 28-33	2010
F. Živanović : <i>Distribution of temperature in solar prominences;</i> Petnica Science Center selected students' papers 2009, p. 27-31	2009

## OUTREACH ACTIVITIES

---

Recording series <i>Matematika</i> of 10 short episodes on topics of modern mathematics, Serbian national television	2021
<i>Park Nauke na Adi</i> , Popularisation of astronomy in Serbia	2012
<i>Researchers' night in Belgrade</i> , Popularisation of astronomy in Serbia	2012
<i>Belgrade Science Festival</i> , Popularisation of mathematics in Serbia	2011

## IT SKILLS

---

Software: Proficient with  $\text{\LaTeX}$ , Matlab, Prolog, Pascal, C/C++, Java and Microsoft Office.

## LANGUAGES

---

Serbian: Native tongue  
English: Highly proficient  
Russian: Basic reading comprehension

## HOBBIES AND INTERESTS

---

Sports: tennis, skiing, karate, kiteboarding, swimming, hiking.  
Other: physics, astronomy, guitar, ballroom dancing.

## REFERENCES

---

**Prof. Alexander F. Ritter** (ritter@maths.ox.ac.uk, Tel: +44 1865 273556)  
University of Oxford, Mathematical Institute, Woodstock Road, Oxford, OX2 6GG, UK

**Prof. Kevin R. McGerty** (mcgerty@maths.ox.ac.uk, Tel: +44 1865 273541)  
University of Oxford, Mathematical Institute, Woodstock Road, Oxford, OX2 6GG, UK

**Prof. Nigel J. Hitchin FRS** (hitchin@maths.ox.ac.uk, Tel: +44 1865 273515)  
University of Oxford, Mathematical Institute, Woodstock Road, Oxford, OX2 6GG, UK.

**Prof. Darko Milinković** (milinko@matf.bg.ac.rs, Tel: +381 11 2027 801)  
University of Belgrade, Faculty of Mathematics, 16 Studentski Trg, 11000 Belgrade, Serbia.