Personal information

Name	Cristina Ana-Maria Palmer-Anghel
Current position	Postdoctoral Research Assistant at University of Oxford
Nationality	Romanian
Email address	palmeranghel@maths.ox.ac.uk
Website url	www.cristinaanghel.ro

Qualifications and employment history

2018–2020	University of Oxford– Post Doc supervised by Professor András Juhász, ERC grant OXTOP
2015–2018	Université Paris Diderot— PhD supervised by Professor Christian Blanchet
	Thesis title: *On quantum invariants: homological model for the coloured Jones polynomials and applications of quantum sl(2|1)*
	Defended: 29th June 2018
2014–2015	Second year master student at Université Paris Diderot
	Mention "Très bien" (grade 18/20)
2013-2015	Researcher in training at the Institute of Mathematics of Bucharest: "Investigation of quantum and finite type invariants, applications in geometry and topology", directed by Prof. Dorin Cheptea.
2013–2014	First year master student at Universitatea din București
	Completed with average 10/10
2013-2014	First year of Master student at SNSB (Ecole Normale Supeérieure Bucarest)
2010–2013	Undergraduate student at Universitatea din București
	Bachelor Thesis: *: Alexander Polynomials of Three Manifolds*
	directed by Prof. Daniel Matei and Prof. Victor Vuletescu
	Completed Bachelor degree with average 10/10.
2012-2013	Preliminary Cycle at SNSB (Ecole Normale Supeérieure Bucarest)

Publications and preprints

[1] *A Homological model for the coloured Jones polynomials*
  https://arxiv.org/abs/1712.04873

[2] *A combinatorial description of the centralizer algebras connected to the Links-Gould Invariant*
  https://arxiv.org/abs/1712.04878

[3] *Modified Turaev-Viro Invariants from quantum sl(2\|1)* (with N. Geer)
  https://arxiv.org/abs/1705.03859 (To appear in Journal of Knot Theory and Its Ramifications)

Awards and Honors:

2015–2018	DIM RDM-IdF PhD fellowship
	"Réseau de Recherche Doctoral en Mathématiques de l'Ile de France"
2014–2015	PGSM "Fondation Sciences Mathématiques de Paris"
	Fellowship for international students for Master 2 at Paris Diderot University
2012–2013	Research Fellowship from University of Bucharest for the project
	"Alexander Polynomials and metabelian representations of knot groups"
	directed by Prof. Daniel Matei and Prof. Victor Vuletescu
2010–2014	Merit scholarship from the University of Bucharest

Selected talks

2018- Talks in Conferences
- A homological model for the coloured Jones polynomials, Winter Braids VIII 5-9 February 2018, CIRM - Luminy, France
- A homological model for the colored Jones polynomials, TQFT et catégorification, 15-20 April 2018, Cargese, France

- A topological formula of the loop expansion of the colored Jones polynomial by using the Lawrence-Krammer-Bigelow representations and a short proof of the Melvin-Morton- Rozansky conjecture, 22-27 April 2018, Thematic School, Matemale, France
- A topological model for the coloured Jones polynomials, Workshop for Young Researchers in Mathematics, 17-18 May 2018, Bucharest, Romania
- A homological model for the coloured Jones polynomials, ICM2018 Satellite Conference: Braid groups, configuration spaces and homotopy theory, 23-27 July 2018, Salvador - Bahia, Brazil
- Quantum invariants via topological intersection pairings, North meets South Colloquium, University of Oxford, 9 November 2018
- Quantum Invariants through the Topology of Configuration Spaces, The Complexity Cluster Workshop, Keble College, University of Oxford, 21 November 2018
- Coloured Jones polynomials and topological intersection pairings, Twisted and Quantum knot invariants, 13-15 December 2018, Durham, United Kingdom

2018- Talks in Seminars

- Homological and geometrical representations of the braid group, GeMAT Seminar, IMAR, 4 January 2018, Bucharest, Romania
- L'homologie de Khovanov et Khovanov symplectique, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 22 January 2018, France
- L'homologie de Khovanov symplectique- definition et invariance, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 20 February 2018, France
- Singularitées et l'invariance de l'Homologie de Khovanov symplectique par rapport aux mouvements de Markov, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 6 March 2018, France
- Categorifications for link invariants coming from symplectic geometry I, GeMAT Seminar, IMAR, 8 Mars 2018, Bucharest, Romania
- Categorifications for link invariants coming from symplectic geometry II, GeMAT Seminar, IMAR , 9 Mars 2018, Bucharest, Romania
- Modified quantum invariants for 3-manifolds from super quantum groups, GeMAT Seminar, IMAR, 6 April 2018, Bucharest, Romania
- L'algèbre d'arcs symplectiques, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 15 May 2018, France
- Quantum invariants for 3-manifolds from $U_q(sl(2|1))$, GeMAT Seminar, IMAR , 16 May 2018, Bucharest, Romania
- Construction des champs de vecteurs non-commutatifs sur des fibres de Milnor, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 22 May 2018, France
- Purité et formalité pour des algébres A infini, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 29 May 2018, France
- Construction des champs de vecteurs non-commutatifs sur des fibres de Milnor II, Groupe de Travail "Invariants géométriques / symplectiques d'entrelacs", Paris Diderot University, 19 June 2018, France
- Non-commutative vector fields and the Fukaya category of the Milnor fibers, GeMAT Seminar, IMAR, 12 July 2018, Bucharest, Romania
- A homological model for the coloured Jones polynomials, GeMAT Seminar, IMAR, 23 August 2018, Bucharest, Romania
- $U_q(sl(2))$-Quantum invariants via topological intersection pairings, Séminaire de Topologie et Géométrie, 29 November 2018, Geneve, Switzerland

2017: Talks in conferences/ seminars

- "Towards a homological model for the Colored Jones polynomial", Seminar at Isaac Newton Institute, 23 February 2017 in the Programme "Homology theories in low dimensional topology", Cambridge
- "A homological description for the colored Jones polynomial", Topology Seminar at the Institute of Mathematics IMAR , 21 April 2017, Bucharest
- "When quantum invariants meet geometry", Les Seminaires des etudiants a l'IMB, 29 May 2017 Dijon
- "Towards a geometrical model for $U_q(sl(2))$-quantum invariants", Les Seminaires geometrie des systemes dynamiques a l'IMB, 1 Juin 2017, Dijon
- "Geometric interpretations for $U_q(sl(2))$ quantum invariants and categorification", Journees des doctorants en topologie, 16-17 November 2017, Grenoble

- "WinterSchool- Categorification, representation theory and symplectic geometry"participant at the Poster Session Hausdorff Research Institute for Mathematics (HIM) 20-24 November 2017, Bonn
- "A homological model for the coloured Jones polynomials", Journees ANR a Nantes, 14-15 December

2016: Talks in conferences/ seminars
- "Pontrjagin classes, Chern numbers and Pontrjagin numbers" and
- "Multiplicative sequences and the Signature theorem", two talks at the Thematic School "Differentiable structures on 7 dimensional spheres", 7-11 March 2016, La Llagonne, France
- "Volume Conjecture for knots and links", Topology Seminar, 24 June, Institute of Bucharest
- "The ADO polynomial and homological interpretations for quantum invariants", Workshop Leysin, 4-7 September 2016, Switzerland
- "Geometric interpretations for quantum invariants"Poster-Heidelberg Laureate Forum,18-23 September
- "Modified 3-manifold invariants from the Lie super-algebra $sl(2|1)$", Groupe de travail"TQFTs Non-Semisimples", 06 December 2016, Paris Diderot University

2015: Talks in conferences/ seminars
- "Heegaard-Floer homology: definitions, examples, basic results" IMAR Workgroup 06 may, Bucharest
- "Multivariable link invariants and renormalized quantum dimension" ECSTATIC, 11-12 June, London -"Renormalized quantum dimension and multivariable invariants for links" Young Topologists Meeting, 6-10 July 2015, EPFL Lausanne
- "Renormalized quantum dimension and multivariable link invariants" Engelberg Summer School,
- "The modified link invariants for representations of unrolled quantum $sl(2)$", 6 October, Groupe de travail: TQFTs Non-Semisimples, Paris Diderot University

2014: Talks in conferences/ seminars
- "Singular cohomology is isomorphic with Cech cohomology",IMAR Workgroup,16 January, Bucharest "The topology of a blow-up", Student seminar on complex geometry, 01 April, Bucharest
- "The Kodaira embedding theorem", Student seminar on complex geometry, 15 April, Bucharest

2013: Talks in conferences/ seminars
- "The Jordan-Brouwer and the Invariance of the domain theorems with modern applications" short listed GCHQ PrizeTomorrow's Mathematicians Today, 16 February 2013, University of Greenwich, London
- "Topological degree and Invariance of domain theorems", Student session, Workshop "Geometry and PDE's", 23-24 May, Timisoara, Romania
- "Twisted polynomials for knots and 3-manifolds with applications to concordance, slicing and fibering" Young Topologists Meeting, 8-12 July 2013, EPFL, Lausanne, Switzerland

Selected conferences attended

2018
- Algebraic Structures in Topology and Geometry , 14-19 January 2018 , Riederalp, Switzerland
- Knotted Embeddings in Dimensions 3 and 4, 12 - 16 February 2018, CIRM - Luminy, France
- 101e rencontre entre mathématiciens et physiciens théoriciens, 7-9 Juin 2018, Strasbourg, France
- 102e rencontre entre mathématiciens et physiciens théoriciens, 13-15 September 2018, Strasbourg, France
- Manifolds Workshop, 3-7 December 2018, Isaac Newton Institute, Cambridge, United Kingdom

2017
- Winter school workshop 16-20 January 2017, Isaac Newton Institute, Cambridge
- 3-manifold workshop 30 January 2017 - 3 February 2017, Isaac Newton Institute, Cambridge
- Workshop on Quantum Topology 2017 - March 9th-10th, University of Lille
- Physics and knot homologies 10th April 2017 to 13th April 2017, Isaac Newton Institute, Cambridge -Thematic School on Quantum Topology and Geometry 9-13 May 2017, IMT, Toulouse
- Quantum Topology and Geometry in Toulouse 15-19 May 2017, IMT, Toulouse
- Groups, Manifolds and K-Theory June 5 - June 9, 2017 , Munster University, Germany
- Quantum topology and categorified representation theory 26-30 June 2017, Isaac Newton Institute, Cambridge -Mapping class groups and their representations 3-7 July 2017, Summer school 2017, Paris

- Workshop: Categorification, representation theory and symplectic geometry, 27-01 December, Bonn
2016
  - "Third SwissMAP Geometry and Topology conference", 25-29 January 2016, Engelberg, Switzerland -"Winter Braids VI", 22-25 February 2016, University of Lille I, France
  - "Journees TQFT, groupes quantiques et invariants non commutatifs" 3-4 May, Universite Paris Diderot
  - "Workshop: Categorification" 16-20 May 2016, Mathematical Institute of the University of Bonn -"ECSTATIC" 13-14 June 2016, Imperial College London, United Kingdom
  - "Symplectic topology, sheaves and mirror symmetry", 27 June -8 July 2016, Paris, France -"International Conference on Knots, Low-Dimensional Topology and Applications"17-23 July Olympic Academy, Ancient Olympia, Greece
  - "Workshop on Symplectic Field Theory VIII", 8 - 12 August 2016, Humboldt University, Berlin -"Around 2-categories and 3-manifolds", 8-9 September, Montpellier, France
  - "Configuration Spaces and Moduli Spaces in Homotopy Theory", 20-21 October, Bonn, Germany
2015
  - "Winter school La Llagonne", 12-16 January 2015, France
  - "Winter Braids V - Pau", 16-19 February, Universite de Pau, France
  - "Mapping class groups, 3- and 4- manifolds", 27 July-1 August, Cluj, Romania
2014
  - Workshop for Young Researchers in Mathematics, 22 - 23 May, 2014 Constanta, Romania
  - Geometric and Quantum Topology in Dimension 3, 23-27 June, 2014 CIRM Luminy, France
  - Young Topologists Meeting 2014 ,30 June-04 July, 2014 University of Copenhagen, Denmark
  - Algebres et Noeuds, 14 November 2014, Universite de Versailles-St Quentin, France
2013
  - "Topology in Low Dimensions", 26-30 August 2013, University of Durham, UK
  - "National School on Algebra - 21st Edition" 2-6 September 2013, Institute of Mathematics, Bucharest -"Second Erlangen Fall School on Quantum Geometry", 7-11 October 2013, Erlangen, Germany
2012
  - "Scuola Matematica Interuniversitaria SMI Perugia" 29 July- 31 August 2012, Perugia, Italy
  - "National School on Algebra, Discrete Invariants in Commutative algebra and Algebraic Geometry", 2-7 September 2012, Mangalia, Romania

Results at mathematics competitions for university students:

2012–2013:	Third Prize at IMC "International Mathematics Competition for University Students"
2011–2012:	Third Prize at IMC "International Mathematics Competition for University Students"
	Silver medal at SEEMOUS Olympiad for University Students
	Second Prize at the National Mathematical Contest "Traian Lalescu" - final round
2010–2011:	First Prize at the National Mathematical Contest "Traian Lalescu" - local round
	Third Prize at the National Mathematical Contest "Traian Lalescu" - final round

Teaching activity

Oxford (2018–2019):
- Tutorials for the course "Introduction to University Mathematics"
- Tutorials for the course "Introduction to Complex Numbers"

Paris (2015–2016):
- Tutorials for the course "Algèbre et analyse élémentaire-L1 Physique" (in French)

References

- Prof. Christian Blanchet- Paris Diderot University, e-mail: firstname.name@imj-prg.fr (firstname=christian, name=blanchet)
- Prof. Jacob Rasmussen- Cambridge University, e-mail: jar60@dpmms.cam.ac.uk
- Prof. Nathan Geer- Utah State University, e-mail: nathan.geer@gmail.com

Languages

- Romanian (native)
- English
- French