

ANA KONTREC

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Department of Mathematics \diamond Faculty of Science, University of Zagreb
Bijenička 30 \diamond 10 000 Zagreb, Croatia

EDUCATION

- Ph.D in Mathematics** 2019
University of Zagreb, Croatia
advisor: prof. Dražen Adamović
thesis: "Representations of certain irrational \mathcal{W} -algebras"
- M. Sc. in Mathematics** 2013 - 2014
Jagiellonian University, Krakow, Poland
advisor: prof. Karol Zyczkowski
thesis: "Additivity properties of quantum maps"
Jacobs University, Bremen, Germany 2012 - 2013
- B. Sc. in Mathematics** 2012
University of Zagreb, Croatia

WORK EXPERIENCE

- Postdoc** Dec 2021 - present
Max Planck Institute for Mathematics, Bonn, Germany
- Postdoc** May 2019 - Nov 2021
Faculty of Science, University of Zagreb
- Research Assistant** 2015 - 2019
Faculty of Science, University of Zagreb

RESEARCH INTERESTS

vertex algebra theory, \mathcal{W} -algebras, mathematical physics

PUBLICATIONS

- D. Adamović, A. Kontrec, *Classification of irreducible modules for Bershadsky-Polyakov algebra at certain levels*, Journal of Algebra and its Applications, Vol. 20 (2021), no. 6, 2150102, arXiv:1910.13781 [math.QA]
- D. Adamović, A. Kontrec, *Bershadsky-Polyakov vertex algebras at positive integer levels and duality*, to appear in Transformation Groups, arXiv:2011.10021 [math.QA]

TALKS AND PRESENTATIONS

- Bershadsky-Polyakov vertex algebras at positive integer levels and duality* Feb 2022
Sapienza Università di Roma (seminar talk)
- Bershadsky-Polyakov vertex algebras at positive integer levels and duality* Oct 2021
Leeds Algebra Seminar (seminar talk)
- Bershadsky-Polyakov vertex algebras at positive integer levels and duality* Apr 2021
Rocky Mountain Representation Theory Seminar (seminar talk)

<i>Classification of irreducible modules for Bershadsky-Polyakov algebra at certain levels</i> Women in Mathematical Physics, BIRS online conference, Banff (poster)	<i>Sep 2020</i>
<i>Classification of irreducible modules for Bershadsky-Polyakov algebra at certain levels</i> Beyond Rationality ∞ , Woudschoten - Zeist, Netherlands (invited speaker)	<i>Nov 2019</i>
<i>Smith algebra and classification of irreducible modules for certain W-algebras</i> Representation Theory XVI, Dubrovnik, Croatia (invited speaker)	<i>Jun 2019</i>
<i>Classification of irreducible modules of some irrational W-algebras</i> Workshop on vertex algebras and infinite-dimensional Lie algebras, Split, Croatia (invited speaker)	<i>Nov 2018</i>
<i>Representations of certain irrational W-algebras</i> Women at the intersection of mathematics and theoretical physics, DESY, Hamburg	<i>Apr 2018</i>
<i>Representations of certain irrational W-algebras</i> Young Researchers in String Mathematics, MPIM, Bonn (poster)	<i>Dec 2017</i>

CONFERENCES

<i>Women in Mathematical Physics</i> , BIRS, Banff (online conference)	<i>Sep 2020</i>
<i>Beyond Rationality ∞</i> , Woudschoten - Zeist, Netherlands	<i>Dec 2019</i>
<i>Representation Theory XVI</i> , Dubrovnik, Croatia	<i>Jun 2019</i>
<i>Beyond Rationality 2</i> , Woudschoten - Zeist, Netherlands	<i>May 2019</i>
<i>Workshop on vertex algebras and infinite-dimensional Lie algebras</i> , Split, Croatia	<i>Nov 2018</i>
<i>Vertex algebras and related topics</i> , Zagreb, Croatia	<i>May 2018</i>
<i>Women at the intersection of mathematics and theoretical physics</i> , DESY, Hamburg	<i>Apr 2018</i>
<i>Affine, vertex and W-algebras</i> , Rome, Italy	<i>Dec 2017</i>
<i>Young Researchers in String Mathematics</i> , MPIM, Bonn	<i>Dec 2017</i>
<i>Representation Theory XV</i> , Dubrovnik, Croatia	<i>Jun 2017</i>
<i>Modular forms are everywhere</i> , MPIM, Bonn	<i>May 2017</i>
<i>Winter School in Geometry and Physics</i> , Srni, Czech Republic	<i>Jan 2016</i>
<i>Representation Theory XIV</i> , Dubrovnik, Croatia	<i>Jun 2015</i>

TEACHING EXPERIENCE

Mathematical methods in physics	2020/21, 2019/20, 2018/19, 2017/18, 2016/17, 2015/16, 2014/15
Algebraic structures	2020/21, 2019/20
Euclidean spaces	2020/21, 2019/20
Introduction to algorithms	2017/18, 2016/17
Analytic geometry	2015/16

LANGUAGES

- Croatian (native)
- English (fluent)
- German, Polish, Italian (intermediate)