

Report Template

Grantee: Dror Bar-Natan
Institution: University of Toronto
Title: Knot Theory, Algebra, and Higher Algebra
Award Number: 260758
Grant Period: July-December, 2013

Please provide a summary (maximum two pages) of scientific accomplishments during the leave period.

During the grant period I finished and submitted two major papers, “Balloons and Hoops and their Universal Finite Type Invariant, BF Theory, and an Ultimate Alexander Invariant” (56 pages, see <http://www.math.toronto.edu/~drorbn/papers/KBH/>) and “Finite Type Invariants of W-Knotted Objects: From Alexander to Kashiwara and Vergne” (joint with Zsuzsanna Dancso, 100 pages, see <http://drorbn.net/index.php?title=WKO>). Neither one is yet accepted.

During the grant period I have travelled to 8 different locations (Montreal, Geneva for 3 months, ETH Zurich, U. of Zurich, Bern, Strasbourg, Lausanne, Grenoble) and have given 19 mathematical lectures in these places (plus an additional two in Toronto). See <http://www.math.toronto.edu/~drorbn/Talks/CUMC-1307/>, <http://www.math.toronto.edu/~drorbn/Talks/CanadaMathCamp-1308/>, <http://www.math.toronto.edu/~drorbn/Talks/Machines/index-1308.html>, <http://www.math.toronto.edu/~drorbn/Talks/Geneva-130917/>, <http://www.math.toronto.edu/~drorbn/Talks/Zurich-130919/>, <http://www.math.toronto.edu/~drorbn/Talks/Geneva-131008/>, <http://www.math.toronto.edu/~drorbn/Talks/Geneva-131024/>, <http://www.math.toronto.edu/~drorbn/Talks/Zurich-1310/>, <http://www.math.toronto.edu/~drorbn/Talks/Bern-131104/>, <http://www.math.toronto.edu/~drorbn/Talks/Lausanne-131118/>, <http://www.math.toronto.edu/~drorbn/Talks/Grenoble-1311/>.

In my 6 months of leave prior to the grant period I have travelled to an additional 12 locations and gave an additional 16 mathematical lecture, plus one master class consisting of about 30 hours of lecturing over a two weeks period in Aarhus, Denmark, and I have completed 3 further papers with two further collaborators (all accepted for publication by now).


All and all I had a very productive year and I’d like to thank the Simons Foundation for their support!

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CERTIFICATION: I certify that the information submitted herein are true, complete, and accurate to the best of my knowledge, and agree to comply with terms and conditions outlined in the award letter.

Grantee Signature: 
Date: February 25, 2014

Signing Official Name: John Bland
Signing Official Signature:
Date: