Yassir Dinar, Ph.D.

✉ dinar@squ.edu.om,yassird@gmail.com

R⁶ https://www.researchgate.net/profile/Yassir-Dinar

Employment history

2023 – · · · ·	**Associate Professor** of Mathematics, Sultan Qaboos University, Oman.
2013 – 2023	**Assistant Professor** of Mathematics, Sultan Qaboos University, Oman.
2014 – 2018	**Associate Professor** of Mathematics, University of Khartoum, Sudan.
2007 – 2014	**Assistant Professor** of Mathematics, University of Khartoum, Sudan.
2011 – 2013	**Head** of the Department of Pure Mathematics, Faculty of Mathematical Sciences, University of Khartoum, Sudan.
2012 –2013	**Visiting Consultant** of Mathematics, Sultan Qaboos University, Oman.
2011 – 2012	**Coordinator** of the Master Program in Mathematics, University of Khartoum, Sudan.
2008 – 2010	**Postdoctoral Fellowship** in Mathematics, The Abdus Salam International Centre For Theoretical Physics (ICTP), Italy.
2005 – 2007	**Lecturer** in Mathematics, University of Khartoum, Sudan.
2003 – 2005	**Teaching Assistant** in Mathematics, University of Khartoum, Sudan.

Education

2003 – 2007	**Ph.D. in Geometry. International School for Advanced Studies (SISSA), Italy**. Thesis title: *Algebraic Frobenius manifolds and primitive conjugacy classes in Weyl groups. Supervisor: Prof. Boris Dubrovin.*
2002 – 2003	**ICTP Diploma in Mathematics.** The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy. Thesis title: *The theorem of de Rham. Supervisor: Prof. Barbara Fantechi..*
1995 – 2001	**BSc (Honour) in Mathematics and Computer Science (First Class)**. University of Khartoum, Sudan.

Awards, prizes and fellowships

2022	**Simons Fellow** on the program "Dispersive hydrodynamics: mathematics, simulation and experiments, with applications in nonlinear waves" at Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom, from 18 July to 12.
2012	**Young Scientists National Award** in Basic Sciences Technology and Innovation, African Union (AU) and Third Word Academy of Science (TWAS).
2003	**Ph.D. Fellowship** at International School for Advanced Studies (SISSA), Italy.
2002	**Scholarship for Diploma in Mathematics** in the Abdus Salam International Centre for Theoretical Physics (ICTP), Italy.
	The Prize of the Sudan Minister of Higher Education and Scientific Research for excellent academic performance in Mathematics.

Membership of professional organizations

2024 – 2026   🔖   Arab Fund Associate of the the Abdus Salam International Centre for Theoretical Physics (ICTP), Italy.

2012 – 2017   🔖   Junior Associate of the Abdus Salam International Centre for Theoretical Physics (ICTP), Italy.

2019 – 2021   🔖   Member of the American Mathematics Society.

Invited talks

Professional meetings

2022   🔖   Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom, as Simons Fellow on the programme " Dispersive hydrodynamics: mathematics, simulation and experiments, with applications in nonlinear waves" , August 11. Talk title: From Drinfeld-Sokolov bihamiltonian structures to Dubrovin-Frobenius manifolds. `https://www.newton.ac.uk/event/hyd2/`

2021   🔖   The annual Integrable Day conference at Loughborough University on November 26. Talk title: Algebraic Frobenius manifolds and classical W-algebras. `https://integrable-systems.leeds.ac.uk/cqi-workshop-2021-22/`

2014   🔖   Fifth International Conference and School in Geometry, Dynamics, Integrable Systems GDIS at ICTP, Italy, June 16 - 27. `http://indico.ictp.it/event/a13202/overview` Talk title: Algebraic Frobenius manifolds, classical W-algebras and semiuniversal deformation of simple singularties. Recording available on `http://video.ictp.it/WEB/2014/2014_06_16-smr2586/2014_06_27-09_50-smr2586.mp4`

At institutions

2022   🔖   University of Glasgow, United Kingdom, September 7. Talk title: Algebraic Froebnius manifolds from classical W algebras.

      🔖   Sultan Qaboos University, March 17. Talk title: "Dubrovin Conjecture on algebraic solutions to WDVV equations.

2012   🔖   University of Aarhus, Denmark, February 15. Talk title: Algebraic Frobenius manifolds and classical W-algebras.

2010   🔖   University of Glasgow, United Kingdom, November 16. Talk title: On classification and construction of algebraic Frobenius manifolds.

2009   🔖   Instituto nacional de Matematica Pura e Aplicada (IMPA), Brazil. Talk title: Reductions of Lie-Poisson brackets and classification of algebraic Frobenius manifolds.

2007   🔖   Instituto Superior Tecnico (IST), Portugal, November 30. Talk title: Algebraic Frobenius manidolds and primitive conjugacy classes in Weyl group.

      🔖   University of Manchester, United Kingdom, October 18. Talk title: On Classification and Construction of Algebraic Frobenius Manifolds.

Organizing workshops

2024   🔖   Recent trends in Mathematics, March 4-6, Sultan Qaboos University.

2023   🔖   International workshop in Algebra, geometry, and their applications, May 11, Sultan Qaboos University.

2021   🔖   International virtual workshop on Frobenius manifolds and related topics, April 7 - 8, Sultan Qaboos University. `https://conferences.squ.edu.om/frobeniusmanifoldsworkshop`

Organizing workshops (continued)

2019   📑   International workshop in Algebra and Geometry, December 18 - 19, Sultan Qaboos University. `https://conferences.squ.edu.om/algebra`

Research publications

Journal Articles

1. **Y. Dinar**, "Low-dimensional bihamiltonian structures of topological type," *Journal of Mathematical Physics*, vol. 64, no. 3, Mar. 2023, 033502, ISSN: 0022-2488. 🔗 DOI: `10.1063/5.0130899`.

2. Z. Al-Maamari and **Y. Dinar**, "Conjugate frobenius manifold and inversion symmetry," *Mathematical Physics, Analysis and Geometry*, vol. 25, no. 3, p. 23, Sep. 2022, ISSN: 1572-9656. 🔗 DOI: `10.1007/s11040-022-09436-3`.

3. Z. Al-Maamari and **Y. Dinar**, "Frobenius manifolds on orbits spaces," *Mathematical Physics, Analysis and Geometry*, vol. 25, no. 3, p. 22, Aug. 2022, ISSN: 1572-9656. 🔗 DOI: `10.1007/s11040-022-09434-5`.

4. **Y. Dinar**, "Algebraic classical w-algebras and frobenius manifolds," *Letters in Mathematical Physics*, vol. 111, no. 5, p. 115, Sep. 2021, ISSN: 1573-0530. 🔗 DOI: `10.1007/s11005-021-01458-2`.

5. **Y. Dinar** and J. Sekiguchi, "The wdvv solution e8(a1)," *Journal of Geometry and Physics*, vol. 170, p. 104 388, 2021, ISSN: 0393-0440. 🔗 DOI: `https://doi.org/10.1016/j.geomphys.2021.104388`.

6. Z. Al-Maamari and **Y. Dinar**, "Dicyclic groups and frobenius manifolds," *Sultan Qaboos University Journal for Science*, vol. 25, no. 2, pp. 107–111, 2021. eprint: `https://journals.squ.edu.om/index.php/squjs/article/view/4329`.

7. **Y. Dinar**, "On integrability of transverse lie–poisson structures at nilpotent elements," *Journal of Geometry and Physics*, vol. 155, p. 103 690, 2020, ISSN: 0393-0440. 🔗 DOI: `https://doi.org/10.1016/j.geomphys.2020.103690`.

8. **Y. Dinar**, "W-algebras and the equivalence of bihamiltonian, drinfeld–sokolov and dirac reductions," *Journal of Geometry and Physics*, vol. 84, pp. 30–42, 2014, ISSN: 0393-0440. 🔗 DOI: `https://doi.org/10.1016/j.geomphys.2014.06.003`.

9. **Y. Dinar**, "Frobenius Manifolds from Subregular Classical W-algebras," *International Mathematics Research Notices*, vol. 2013, no. 12, pp. 2822–2861, May 2012, ISSN: 1073-7928. 🔗 DOI: `10.1093/imrn/rns121`.

10. **Y. Dinar**, "Frobenius manifolds from regular classical w-algebras," *Advances in Mathematics*, vol. 226, no. 6, pp. 5018–5040, 2011, ISSN: 0001-8708. 🔗 DOI: `https://doi.org/10.1016/j.aim.2010.12.024`.

11. **Y. Dinar**, "On classification and construction of algebraic frobenius manifolds," *Journal of Geometry and Physics*, vol. 58, no. 9, pp. 1171–1185, 2008, ISSN: 0393-0440. 🔗 DOI: `https://doi.org/10.1016/j.geomphys.2008.04.001`.

Postgraduate thesis supervision

Sultan Qaboos University

2018–2022   📑   Zainab Al-Maamari. **PhD thesis title**: "Conjugate Frobenius structures on the orbit space of linear representations". External exmainers: Dr. Antonio Morro and Dr. Christopher Seaton.

2017-2018   📑   Nafja Al-Kitani. MSc thesis title: "Polynomial Frobenius manifold associated to Nilpotent orbits in special Lie algebras".

Postgraduate thesis supervision (continued)

2015–2016   ■ Sheikha Al-kaabi. MSc thesis title: "Invariant polynomials rings of irreducible Representations of Coxeter groups of type A_n".

University of Khartoum

2012–2013   ■ Alsadig Ali. MSc thesis title: "Elliptic integrals".

■ Alkhanssa Abdallah. MSc thesis title: "Classification of finite reflection groups".

■ Noor Alhoda Ahmed. MSc thesis title: "The integrability of KDV equation".

■ ALshaymaa Ahmed. MSc thesis title: "Representation theory of the symmetric group".

■ Ebtehag Alkhider. MSc thesis title: " Quiver representations".

Final year undergraduate projects

Sultan Qaboos University

2023–2024   ■ Yumna Bait Bin Saleem, Project: "Chemical Graph Theory".

■ Ali Al Malki, Project: " Conics and Cubic Curves in Algebraic Geometry".

2022–2023   ■ Alzahraa Al-Khaifi and Ro'A Al-Ma'Mari, Project: "Implicit function theorem".

2021-2022   ■ Sara Al-Rashdi. Project: "Geometry and its applications".

2020–2021   ■ Maather Al-Hadidi and Hawwa Al-Katri. Project: "Curvature of geometric sets".

2019-2020   ■ Razan Al-Maamari and Mathayil Al-Hatmi. Project: "Mathematics of soap films".

University of Khartoum

2011-2012   ■ Ibrar Elemam and Suad Hashim. Project: "Mathematical introduction to wave theory".

■ Two students. Project: "Data mining".

Teaching

Sultan Qaboos University

MATH6021 Group Theory	■ For 4 semesters. Master students. The number of registrants ranged between 1 and 4
MATH5553 Differential Geometry I	■ For 2 semesters (graduate and undergraduate students). The numbers of registrants were 2 and 6.
MATH4453 Abstract Algebra I	■ For 2 semesters. The numbers of registrants were 11 and 18.
MATH4174 Differential Equations	■ For 2 semesters. Engineering students. The numbers of registrants were 12 and 36.
MATH3340 Discrete Mathematics	■ For 7 semesters. Computer science students. The number of registrants ranged between 14 and 35.
MATH2350 Foundation of Mathematics	■ For 6 semesters. The number of registrants ranged between 23 and 35.
MATH2108 Calculus 2	■ For 3 semesters. The numbers of registrants ranged between 27 and 45.
MATH2107 Calculus I	■ For 4 semesters. The numbers of registrants ranged between 15 and 37.

Teaching (continued)

MATH1105 Business Mathematics   For 7 Semesters. The number of registrant ranged between 28 to 44.

MATH1103 Foundation Mathematics I   For 2 semesters. The numbers of registrants were 30 and 35.

University of Khartoum

Undergraduate courses   P412 Differential Geometry, A201 Differential Equations and P101 Basic Mathematics.

Graduate course   Introduction to Lie Groups and Lie Algebras and Commutative Rings.

Conferences/workshops

Contributed talks

2019   Finite dimensional integrable systems in Geometry and Mathematical Physics (FDIS), Shanghai Jiao Tong University, China, May 7 - 11. Talk title: "Integrability of transverse Poisson structure of Lie-Poisson structure and Frobenius manifold".

2018   Workshop on Integrable Systems, University of Sydney, Australia, November 29 - 30. Talk title: "Argument shift method and transverse Poisson structure of Lie-Poisson brackets". `https://wp.maths.usyd.edu.au/igs/workshops/integrable-systems-2018/`.

2015   17th International Conference on Mathematics and Computation Science, Thailand, December 17-18. Talk title: "The weights of distinguished sl_2 subalgebras in D_n".

2014   International Congress of Mathematicians (ICM), Korea, August 13 - 21. Talk title: "Algebraic Frobenius manifolds, classical W-algebras and deformation of simple singularities". `http://www.icm2014.org/en/program/scientific/short.html`

2014   30th International Colloquium on Group Theoretical Methods in Physics, Belgium, July 14 - 18. Talk title: "The equivalence of Drinfeld-Sokolov, bihamiltonian and Dirac reductions". `https://group30.ugent.be/`

2012   Masterclass: Quantum Groups, Copenhagen University, Denmark, March 5 - 9 . Talk title: Algebraic Frobenius manifolds and classical W-algebras. `https://www.math.ku.dk/english/research/conferences/2012/quantumgroups/`

Poster presentations

2009   School and Conference on geometric representation and Lie algebras, University of Ottawa, Canada, June 15 - July 3. Poster title: "Classical W-algebras and algebric Frobenius manifolds". `https://www.fields.utoronto.ca/programs/scientific/08-09/geomrep/`

2008   School and Conference on Poisson geometry in mathematics and physics, The École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, July 1 - 11. Poster title: "On classification and construction of algebraic Frobenius manifolds".

2007   Workshop on random and integrable models in mathematics and physics, Université Catholique de Louvain, Belgium, September 11 - 15.

Attended

2018   International Congress of Mathematicians (ICM), Brazil, August 1 - 9. `https://icm2018.impa.br/portal/main.html`

2012   Poisson Geometry in Mathematics and Physics, Utrecht University, Netherlands, July 23 - 27. `http://www2.projects.science.uu.nl/poisson2012/Home.php`

Conferences/workshops (continued)

- Workshop on Contemporary Ways of Integrability, Universidade de Lisboa, Portugal, May 16 - 19. `http://gfm.cii.fc.ul.pt/contemporary/`
- 2010 — The International Congress of Mathematicians (ICM), India, August 19 - 27. `https://www.mathunion.org/fileadmin/IMU/ICM2010/offline/www.icm2010.in/index.html`
- 2010 — Integrable Systems in Pure and Applied Mathematics, Conference in honour of Boris Dubrovin's 60th birthday, Italy, June 8 - 12. `http://frompde.sissa.it/integrablesystems/index.html`
- 2007 — Junior workshop on integrable systems, Universit di Milano Bicocca, Italy, September 25 - 27.
- 2006 — School and Conference on Poisson geometry in mathematics and physics, Keio University, Japan, June 5 - 9. `https://monge.u-bourgogne.fr/gdito/poisson2006/index.php?page=home`
- 2006 — Workshop on homological mirror symmetry, The Erwin Schrödinger International Institute for Mathematical Physics (ESI), Austria, March 26 - 30. `http://hep.itp.tuwien.ac.at/~kreuzer/HMS.html`

Community service

College of Science, Sultan Qaboos University

- 2021–2023 — Member of the Examination officer.
- 2019–2021 — Member of E-Learning Committee.
- 2018–2021 — Member of Newsletter Committee.
- 2020–2021 — Member of Emergency Remote Learning Support Committee.

Department of Mathematics, College of Science, Sultan Qaboos University

- 2022–···· — **Chair** of the Teaching Committee.
- Member of the Curriculum Committee.
- 2021–2023 — **Chair** of Examination Committee.
- 2019-2021 — **Chair** of the E-Learning Committee.
- 2020-2022 — Member of the Research Committee.
- 2018–2020 — Member of Examination Committee.
- 2014–2018 — Member of the Curriculum Committee.
- 2014–2016 — Seminar Convener.

University of Khartoum

- 2011–2014 — Member of the Faculty of Mathematical Sciences Research Board.
- 2011–2013 — Member of the University Senate.
- 2011–2013 — Member of the Faculty of Mathematical Sciences Council.
- Member of Curriculum Reform Committee, Faculty of mathematical Sciences.

References

Available on Request