

Curriculum Vitae

Layla Sorkatti



1. PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

Assistant Professor, Department of Pure Mathematics,
University of Khartoum & Al-Neelain University,
Khartoum, Sudan.

CWM Ambassador Sudan.
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2. Qualifications

- MSc, First class B.Sc. (Honors), University of Khartoum, Sudan.
- Ph.D in Pure Math, University of Bath, England.

3. Work Experience

- Assistant Professor, Linköping University, Sweden for 4 months, 2 years.
- fellowship ICTP, Trieste and Dip of Math. Tor Vergata, Roma, Italy, 2018.
- Math Olimpiad team at University of Rwanda, Rwanda, 2018 -present.
- Research visitor/Teaching at University of Darelsalaam, Tanzania.
- Research visitor/Teaching at Eduardo Mondlane University, Maputo.
- Assistant Professor (part-time) in Faculty of Mathematical and Statistical Sciences, Al-Neelain University, Khartoum, Sudan, Oct 2017-present.
- Regular visitor research visitor/Teaching at University of Makerere, Uganda, 2017-2020.
- Post-doc fellow at University of bath, UK, 2015 and tutor of Algebra 2B, Representation theory, Galois theory, Algebra 2A, and Algebra 1A, 2013-2015.

4. Computer Skills

I. **Operating Systems** Windows, Linux (Red Hat, Fedora, Ubuntu).

II. **Programming Languages, Databases Packages and other software** Sage, GAP, Maculay2, Matlab and Latex. Pascal, C/C++, Python, Java, Oracle Oracle 10G/ 11G Application Server.

5. **Teaching Experience** I have taught a variety of courses at undergraduate level.

I. **Undergraduate Courses:** Some of the modules that I have taught are Galois Theory, Rings and Module Theory, Real Analysis II, Group Theory, Basic Mathematics, Algebra and Geometry, Number theory, Numerical Analysis and Functions of Several Variables.

II. **Postgraduate Courses:** Some of the modules that I have taught are:

- **Algebraic Geometry and Commutative Algebra**
 - MSc program, Royal University of Phnom Penh, Compodia, 2020.
- **Commutative Algebra**
 - MSc program, Eduardo Mondlane University, Maputo, 2020/2021.
 - MSc program, Dar-elsalaam University, Tanzania, 2018.
- **Advanced Algebra** The PhD Mathematics Program at Makerere University, Uganda, 2017.
- **Abstract Algebra** MSc program, University of Khartoum, Sudan, 2015 – 2016.
- **Rings and Modules** MSc program, University of Khartoum, Sudan, 2015 – 2016.

6. Research Experience

I. **Research Interest:** Group, rings and module Theory - (non)/ Commutative algebra - Representation Theory - Symplectic Algebras.

II. Publications

- L. Sorkatti, A bound for the class of Nilpotent Symplectic Alternating Algebras, Int. J. Algebra and Comp., To appear, DOI: 10.1142/S0218196722500035.
- A. Mortazavi, B. Davvaz and L.Sorkatti, Krasner H_v -homology Functors, submitted.
- L. Sorkatti and G. Traustason, Nilpotent Symplectic Alternating Algebras II, Int. J. Algebra and Comp. , 26 (2016), 1071-1094.
- L. Sorkatti and G. Traustason, Nilpotent Symplectic Alternating Algebras III, Int. J. Algebra and Comp. , 26 (2016), 1095-1124.
- L. Sorkatti and G. Traustason, Nilpotent symplectic alternating algebras I, J. Algebra, 423 (2015), 615-635.
- L. Sorkatti, Nilpotent symplectic alternating algebras, <https://researchportal.bath.ac.uk/en/nilpotent-symplectic-alternating-algebras>, 2015.
- Cohomology and linear deformation of Symplectic Alternating Algebras, on preparation.
- (Text book in preparation) Mathematical challenges A course in problem solving with Prof. Paul Vaderlind

7. Conferences, Schools and Talks

- June 2021 Co-organiser: Ongoing Algebra zoom seminar in Sudan.
- May 2021 Zoom seminar on ‘Women Mathematician in Sudan’, The Tunisian Women Mathematicians’ Association, The celebration of the day of May 12, 2021.
- May 2021 Zoom seminar on nilpotent Symplectic alternating algebras, International Conference on Emerging Trends in Pure and Applied Mathematics, Bahrain University, Bahrain.
- May 2021 Zoom seminar on Women Mathematician in Sudan, Gender Gap Science project, CWM Ambassadors.
- Aug. 2017 A satellite intensive hands-on tutorial on the computational algebra system GAP, University of Birmingham, UK.
- Dec. 2018 A Talk ‘On Quivers and path algebras’ at Makerere University, Uganda. (Keyword: Quivers, Reprn. of quivers, Gabriel’s theorem, path algebra, The category of quiver representation and its equivalence with the category of K/γ -modules, kac polynomials of quivers).
- Aug. 2019 The 4th Network Meeting for Sida and ISP Funded PhD Students and Postdocs in Mathematics, Pyramid hotels & resorts, Bishoftu, Ethiopia.
- Oct. 2018 Symplectic Alternating Algebras conference, University of Rome (II), Rome, Italy.
- Nov. 2018 Nilpotent Symplectic Alternating Algebras seminar at ICTP, Italy.

- Aug. 2018 The 3rd network meeting at imperial botanical beach hotel in Entebbe - Uganda.
- Nov. 2017 *- SAMSA Conference, presented a paper on Nilpotent Symplectic Algebras, Tanzania.
 *- Symplectic Alternating Algebras, A paper presented at the The 3rd Inverse Problems Africa: School and Confer
 *- Survey on "Nil-solvable-Nilpotent" Symplectic Alternating Algebras, department of Math.,
 Makerere University, Kampala – Uganda.
- Aug. 2017 Nilpotent Symplectic Alternating Algebras, A paper presented at Groups -
 St. Andrews 2017 in University of Birmingham, UK.
- July 2017 Co-organiser: "First national postgraduate workshop in Modeling in Sudan", Sudanese Math.
 Society at Faculty of Mathematical Sciences, Al-Neelain University, Sudan.
- Oct. 2016 Nilpotent Symplectic Alternating Algebras, paper presentation at the third EAUMP
 conference: Advances in Mathematics and its Applications, Makerere University.
- Aug. 2016 Nilpotent Symplectic Alternating Algebras, A paper presented at the First forum of
 mathematics in Sudan, Sudan University, Sudan.
- Aug. 2016 Co-organiser: "First forum of mathematics in Sudan" by Sudanese Mathematical Society at
 Faculty of Sciences, El-Sudan University.
- June 2016 Symplectic Alternating Algebras, Postgraduate seminars series, Faculty of Mathematical and statistical Sciences,
 Al-Neelien Univeristy, Sudan.
- May 2016 Teaching Assistent & co-organiser of Mini conference "Mathematics Problem Solving Skills" by
 Prof. Joyati Debnath from Winona State University, USA for MSc program of Industrial and
 Computational Mathematics, University of Khartoum, Sudan.
- Dec. 2015 Organiser of "Mathematics Olympiad workshop" to train leaders in Sudan, funded by Faculty
 of Mathematical Sciences, University of Khartoum, Sudan. Advisor: Prof. Paul Vaderlind,
 Department of Mathematics, Stockholm University.
- July 2013 Symplectic Alternating Algebras, Paper presentation at Groups - St. Andrews, University of
 St. Andrews, UK.
- April 2011 IT Competition at The college of information Technology, Zayed University, UAE.
- Dec. 2010 EAUMP School on Linear Algebra and the Fast Fourier Transformation, Uganda (offered a full
 scholarship diploma at The Abdus Salam International Centre for Theoretical Physics, Italy
 being nominated as the best student).
- Aug 2009 Groups - St. Andrews Conference 2009 in Bath, UK.
- Sep. 2009 University Putra Malaysia (UPM), Johor, Malaysia. Students scientific journey.
- 2009 14 Workshops on Linux (Linux Internals & Programming Essentials, Device Driver
 Programming on Linux , Network Programming on Linux, etc) by Linux Learning Centre held
 in the Faculty of Mathematical Sciences, University of Khartoum, Khartoum, Sudan.