PUBLICATIONS

I. Books and Editorship

1. **Ajayi, D. O. A**.: Exploration of Pure Mathematics: Convergence of the abstract, the Beautiful and the Useful. Inaugural Lecture. Ibadan University Press (2024). ii + 99pp. ISBN: 978-978-8550-31-0 https://www.researchgate.net/publication/392966949_Exploration_of_Pure_Mathematics_Convergence_of_the_Abstract_the_Beautiful_and_the_Useful

2. **Ajayi, D. O. A.:** Topology. Distance Learning Centre, University of Ibadan, Ibadan. (2015) ix+197 pp.
3. Payne, V. F., **Ajayi, D. O. A**. and Adeyemo, H. P. (Editors): Perspectives and Developments in Mathematics, Proceedings of the Conference in Honour of Professor Samuel Akindiji Ilori, January 10 -11, 2015, Published by the National Mathematical Centre, Abuja and Department of Mathematics, University of Ibadan, Ibadan. (2015). xiv + 416pp. ISBN: 978-8141-26-9.

4. Ekhaguere, G. O. S., **Ajayi, D. O. A.** and Adeyemo, H. P. (Editors): Samuel Akindijj Ilori: Tributes and Refelections at Seventy. Department of Mathematics, University of Ibadan, Ibadan, (2015) xiii +132 pp. ISBN: 978-978-018-993-8
5. Ayoola, E. O., Payne, V. F., **Ajayi, D. O. A**. (Editors): Advances in Mathematics, Proceedings of A Memorial Conference in Honour of Late Professor C. O. A. Sowunmi, held at the University of Ibadan, Ibadan, 15 January, 2009. (2009). **(MR2867571 (2012i:34001))**
6. **Ajayi, D. O. A**.: Theory of Modules. Distance Learning Centre, University of Ibadan, Ibadan. (2006) ix+113pp. ISBN:978-021-265-5
7. Ilori, S. A., and **Ajayi, D. O. A.:** University Mathematics Series2 – Algebra. Y-Books, Ibadan (2000). vii+308pp. ISBN:978-34532-99-7
8. Ekhaguere, G. O. S., Ugbebor, O. O., **Ajayi, D. O. A.** (Editors): Directions in Mathematics, Proceedings of an International Conference in Honour of Professor H. O. Tejumola, FAS, July 10-11, 1997, University of Ibadan, Ibadan, Y-books, Ibadan (1999). ISBN:978-34532-6-2. (**MR 2000m:00048)**

II. Journal Articles

9. Adetunji, A. P. , Adeyemo, H. P., **Ajayi**, **D. O. A,** Ilori, S. A.: Characterizing smoothness of type A Schubert varieties, through palindromic Poincare polynomial method Acta Universittatis Apulensis 77, (2024)25-38

10. Ogundipe, O. L. and **Ajayi, D. O**.: Groebner Bases for Real Flag Manifold $F(1, 1, 1, m - 3)$. Emmanuel Alayande University of Education Journal of Multidisciplinary Studies Vol 1 (1) (2024) 139 - 148
11. Adefokun, T. C., Ogundipe, O. L., **Ajayi, D. O.** : On the maximum induced matching numbers of stacked-book graphs. International Journal of Mathematical Sciences and Optimization: Theory and Applications, 10(4),(2024) 114-120.
12. Akwu, A. D. and **Ajayi, D. O. A**.: Totally antimagic total labeling of ladders, prisms and generalised Petersen graphs, Journal of Discrete Mathematical Sciences and Cryptography, 27:1, (2024) 31–44, DOI: 10.47974/JDMSC-1229

13. Adefokun, T. C. and **Ajayi, D. O. A**.: Bounds of the radio number of stacked-book graph with odd paths. International J. Math. Combin. Vol. 1 (2023), 87 - 97.
14. Adefokun, T. C. and **Ajayi, D. O. A.:** On the bounds of the radio numbers of stacked-book graph. International J. Math. Combin. Vol. 4 (2022), 66-73
15. Sangodapo, T. O. and **Ajayi, D. O. A**.: Certain characterisations of intuitionistic affine fuzzy sets. Trans. of the Nigerian Association of Mathematical Physics Vol. 16, (2021) 115-122.
16. Akwu, A. D., Oyewumi, O. and **Ajayi, D. O. A.**: The outer-connected vertex edge domination number in Cartesian product graphs. Journal of Discrete Mathematical Sciences and Cryptography, 1-13, (2020) DOI: 10.1080/09720529.2020.1748272
17. Sangodapo, T. O. and **Ajayi, D. O. A**.: Tverberg's theorem on convex fuzzy sets. Journal of the Nigerian Association of Mathematical Physics. Vol. 51 (2019), 321-324
18. **Ajayi, D. O. A.** and Adefokun, T. C.: On bounds of radio number of certain product graphs. Journal of Nigerian Mathematical Society Vol. 37, Issue 2, (2018) 71 -76. **(MR3853843)**
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19. Sangodapo, T. O. and **Ajayi, D. O. A**.: The theorems of Radon and Helly on convex fuzzy sets. Transactions of the Nigerian Association of Mathematical Physics Vol. 6 (2018), 382 - 389
20. Adefokun, T. C. and **Ajayi, D. O. A.**: On maximum induced matching numbers of special grids. Journal of Mathematics and Applications vol. 41 (2018), 5- 18. **(MR3895959)**
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21. **Ajayi, D. O. A.** and Adefokun, T. C.: Some bounds on the maximum induced matching numbers of certain grids. Acta Universitatis Matthiae Belii, series Mathematics Vol. 25 (2017), 63–71. **(MR3730781)**
22. Sangodapo, T. O and **Ajayi, D. O. A**.: On affine and convex fuzzy sets using fuzzy points. Mayfeb Journal of Mathematics 3 (2017) 13-19.
23. Adefokun, T. C. and **Ajayi, D. O. A**.: L(1,1)-Labeling of direct product of cycles. Discrete Mathematics. Algorithms and Applications Vol. 8, No. 1 (2016) 1650003 (19 pages) **(MR 3464367)**
24. Akwu, A. D. and **Ajayi, D. O. A**.: Decomposing certain equipartite graphs into sunlet graphs of length 2p. AKCE International Journal of Graphs and Combinatorics Vol. 13, (2016) 267 -271. (**MR3616611**)
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27. **Ajayi, D. O. A.** and Adefokun, T. C.: Sufficient conditions for Hamiltoniancity of certain special graphs. Acta Universitatis Apulensis Vol. 39, (2014) 301-304. (**MR330442).**
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28. Akwu, D. A. and **Ajayi, D. O. A.:** Symmetric Hamilton cycle decomposition of complete graphs plus a 1-factor. International Journal of Mathematical Combinatorics. Vol. 3, (2013) 91-95.
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33. **Ajayi, D. O. A**.: Nonimmersion results for the real flag manifolds RF(1, 1, 1, n-3). Kragujevac Journal of Mathematics 34, (2010) 31-38. (**MR 2897893**)
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34. Ilori, S. A. and **Ajayi, D. O**.: Vector fields on the real flag manifolds RF(1,1, n-2). Math.Slovaka Vol. 58 (1) (2008): 127-129. (**MR 2372831(2008j:57046**))
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39. Ajayi, D. O. and Ilori, S. A.: Non-embedding of the real flag manifolds RF(1,1,n-2). Journal of Australian Mathematical Society (Series A) Vol. 66, (1999) 51-55 **((MR 1685695 (99k:57061))** http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=4974640

III. Refereed Conference Proceedings

40. **Ajayi, D. O. A.** and Adeyemo, H. P. : A review of recent (1990 to date) research trends of Professor Samuel Akindiji Ilori. Perspectives and Developments in Mathematics, Proceedings of Conference in Honour of Professor S. A. Ilori, (2015), 21-28
41. **Ajayi, D. O. A.** and Akwu, A. D.: Complete bipartite graphs are totally antimagic. Perspectives and Developments in Mathematics, Proceedings of Conference in Honour of Professor S. A. Ilori, (2015) 93-100.
42. Sangodapo, T. O. and **Ajayi, D. O. A.:** On the topological colored Tverberg theorem and colored winding number conjecture on the plane. Imhotep Mathematical Proceedings Vol. 2 (1) (2015)71-75. **(MR3486850)**
43. **Ajayi, D. O. A.**: The vector field problem for the flag manifold RF(1,1,n-2). Proceedings of International Conference on New Trends in the Mathematical and Computer Science with Applications to the real World Problems NTMCS (2006), 587-594.
44. **Ajayi, D. O.**: Immersions and embeddings of the real flag manifold RF(1, 1, 1, n-3). Appreciating the Future in Mathematics, Proceedings of International Conference in Honour of Professor E. A. Akinrelere (2006) 18-21.
45. **Ajayi, D. O**.: Stiefel-Whitney classes of certain incomplete real flag manifolds. Directions in Mathematics, Proceeding of International Conference in Honour of Prof. H. O. Tejumola (1999) 255-262 **(MR 1754558).**

IV. Preprints:

46. Adefokun, T. A. , Ogundipe, O. L., Onaiwu, K. N., **Ajayi, D. O.:** Hamiltonian Complete Number of Some Variants of Caterpillar Graphs. arXiv:2209.04204 [math.CO]
47. Adefokun, T. A., Ogundipe, O. L.**, Ajayi, D. O.:** On the maximum induced matching number of a stacked-book graph. arXiv:2209.10855 [math.CO] (2022)
48. Barbensi, A., Yoon, H. R., Madsen, C.D., **Ajayi, D. O**., Stumpf, M. P. H., Harrignton, H. A.: Hypergraphs for multiscale cycles in structured data. arXiv:2210.07545v1 [math.AT] 2022
49. Adefokun, T. and **Ajayi, D. O.:** On Radio number of stacked-book graphs. arXiv:1901.00355 [math.CO] (2019)
50. **Ajayi, D. O. A.** and Adefokun, T. C.: Some bounds on the maximum induced matching numbers of certain grids. ArXiv:1603. 06967 (2016)

51. Akwu, A. D. and **Ajayi, D**. **O. A.**: On totally antimagic total labeling of complete bipartite graphs. ArXiv: 1601.02112 (2016)
52. Adefokun, T. C. and **Ajayi, D. O**.: On maximum induced matching numbers of special grids. arXiv: 1611.02042v1 [math.CO] (2016)
53. Akwu, A. D. and **Ajayi, D. O. A**.: Totally antimagic total labelling of ladders, prisms and generalized Petersen graphs. ArXiv: 1609.04299 (2016)
54. **Ajayi, D. O. A.**: Non immersion results for the real flag manifolds RF(1,1,1, n-3). ICTP Preprint IC/2006/111.

V. Research Projects/Thesis

55. **Suberu, D. O**. (1990)."Musielak –Orlicz Spaces" M.Sc. (Functional Analysis) Dissertation. Supervisor: Dr. V. A. Babalola
56. **Suberu, D. O**. (1996). "Stiefel-Whitney Classes and the span of some real flag manifolds" Ph.D. Thesis. Supervisor: Prof. S. A. Ilori