



Metric Spaces

Consolidated Lecture Notes

Collated and Typeset by Oliver Dixon

Based on the [MAT00051I](#) Lecture Series

University of York

Semester I, 2023/24

Compilation Date	18th December 2023
Author Contact	od641@york.ac.uk
Sources Link	https://github.com/oliverdixon/l5-notes/tree/master/metric-spaces
Latest Commit Hash	5af8285603a077399bdac641c79dc223aa8de0b8 (master)
York Web Link	https://www-users.york.ac.uk/~od641/l5-notes/metric-spaces.pdf
Document Licence	MIT Licence
Cover Image Credit	Gerd Altmann of Pixabay

Recommended Texts & Further Reading

- [OSe07] Mícheál O'Searcoid. *Metric Spaces*. Springer Undergraduate Mathematics Series. **Core module text**. London, United Kingdom: Springer, 2007. ISBN: 978-1-846283697.
- [SV06] Satish Shiralí and Harkrishan Lal Vasudeva. *Metric Spaces*. **Core module text**. London, United Kingdom: Springer, 2006. ISBN: 978-1-852339227.
- [Hut81] John Hutchinson. "Fractals and Self Similarity". In: *Indiana University Mathematics Journal* 30.5 (1981). **For interest only**, pp. 713–747. ISSN: 0022-2518, 1943-5258. URL: <https://www.jstor.org/stable/24893080>.
- [Bee13] Gerald Beer. "The Structure of Extended Real-Valued Metric Spaces". In: *Set-Valued and Variational Analysis* 21 (2013). **For interest only**, pp. 591–602. ISSN: 1877-0541. DOI: [10.1007/s11228-013-0255-2](https://doi.org/10.1007/s11228-013-0255-2).
- [Kop88] Ralph Kopperman. "All Topologies Come From Generalized Metrics". In: *The American Mathematical Monthly* 95.2 (1988). **For interest only**, pp. 89–97. ISSN: 0002-9890, 1930-0972. URL: <https://www.jstor.org/stable/2323060>.