

Lecture 16.01.2020

- scientific approach: trying to solve a new problem with an old method, an old problem with a new method – but not solving a new problem with a new method
- abstracts are very important because that is often all that people see
- since 2002 the most important thing in academic writing is the number of citations a paper receives
- web of Science is a citation counting system
- *Impact Factor* is a measure of how much a publication/journal matters
- papers are dense and have previously unknown research
- length of 4 to 40 pages – have all the normal/expected sections
- letters are usually shorter, much denser, of high importance – 4 pages
- bookends reference miner and reference management software
- impact factor and citations are first order approximations of the quality of a paper
- some good journals: Nature, Science, PNAS, Nature Communications, SIAM Review, Physical Review Letters, Nature Physics, Nonlinearity, Communications in Mathematical Physics, Physical Review E, IEEE Transactions on Pattern Analysis and Machine Intelligence. . .
- reviews/monographs: comprehensive and organized collection and synthesis of a new body of knowledge – someone goes through many papers and writes something about the state of the field or something
- review can be by many authors, monograph only has one author
- **write a paper about the solving of quadratic equations according to the principles outlined in the Read_applied.pdf p. 12**