

Competition Topics – Associate Professor, 4th position

Mathematical analysis and biostatistics

1. Sequences, series of real numbers, power series
2. Limits, continuity and derivatives of real functions
3. Partial derivatives, differential of a function
4. Riemann integral, improper integral, multiple integrals
5. Taylor series, Fourier series
6. Differential equations
7. Probability density function, cumulative distribution function, distributions
8. Parameter estimation, hypothesis testing
9. Regression and correlation

Bibliography:

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3. Balázs M., Kolumbán J., Matematikai Analízis, (Analiză Matematică) Dacia Könyvkiadó, Cluj-Napoca 1978.
4. Walter Rudin A Matematikai Analízis Alapjai (Bazele Analizei Matematice) Tankönyvkiadó Budapest 1978.
5. Demidovici B.P., Analízis Példatár, (Probleme de Analiză Matematică) Tankönyvkiadó, Budapest, 1973 Probleme.
6. Fihtengolt G. M., Curs de calcul diferenţial şi integral, vol.I-II-III. Editura Tehnică, Bucureşti, 1963
7. Szilágyi P., Közönséges differenciál-egyenletek, I. (Ecuatii Diferenţiale Ordinare) Erdélyi Tankönyvtanács, Cluj-Napoca, 2001.
8. Sorin Rădulescu, Marius Rădulescu Teoreme şi Probleme de Analiză Matematică Editura Didactică şi Pedagogică Bucureşti 1982.
9. Harnos Zsolt, Ladányi Márta, Biometria agrártudományi alkalmazásokkal, Aula Kiadó, Budapest, 2005.