

Ming-Ying Leung

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Biosketch: www.math.utep.edu/Faculty/mleung/Leung_Vita.pdf

Website: www.math.utep.edu/Faculty/mleung

Biography:

Dr. Leung is professor of mathematics and director of Bioinformatics and Computational Science Programs. She has strong interests in interdisciplinary research involving mathematical skills and intensive computational techniques, especially on developing efficient algorithms to predict how genomic data are stored, transmitted, and ultimately expressed in life processes. Her research theme is structural bioinformatics on sequence analysis and structure prediction of biomolecules such as DNA, RNA, and proteins.

In several ongoing projects funded by NSF, NIH, and USDA, Dr. Leung has proposed mathematical models for RNA analysis, implemented in JAVA, R, and C++ codes, to predict their secondary structures. She has also developed online education modules to introduce bioinformatics research in agricultural science, as part of the curriculum integrated in selected undergraduate and graduate statistics courses, raising the awareness of using mathematics in our efforts to combat agricultural diseases and biomedical research problems.

Portrait: www.math.utep.edu/Faculty/mleung/images/mylphoto.jpg

Status: Faculty

Will Mentor

- Doctoral students
- Pre-doctoral students

Research interests

- Scan Statistics
- Poisson Approximation
- Excursion Theory
- Markov Chain and Urn Model
- Prediction Algorithms
- Molecular Sequence and Structure

Fields of expertise

- Applied Probability
- Bioinformatics and Biostatistics
- Computational Bioscience