

## NURISYA MOHD SHAH Ph.D. (Concordia University)

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### EXPERTISE

MATHEMATICAL PHYSICS, NONCOMMUTATIVE QUANTUM MECHANICS MODEL

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Dr. Nurisya received her Ph.D in Physics (Mathematical Physics) in 2014 from Concordia University, Montreal, Canada. Her research work is in the area of noncommutative quantum mechanics and has been actively involved in developing research in theoretical physics in the department and thus the faculty. In addition, she is also a research associate at the Laboratory of Computational Sciences and Mathematical Physics at Institute of Mathematical Research, INSPEM, UPM.

### Current Research Interest

- **Quantum states of the noncommutative quantum mechanics model**

The study of associated wave functions in the noncommutative quantum mechanics model

- **Theoretical studies on the energy band structure of quantum dots**

Analytical methods to closely study the energy band structure of quantum dots heterostructure

- **Orthogonal polynomials in physics**

Analysis of the properties of polynomials arise in the noncommutative quantum mechanics model i.e. deformed Hermite polynomials for noncommutative quantum harmonic oscillator, Laguerre polynomials associated to Morse potential ect

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### LINK TO POSTGRADUATE FIELD OF STUDY:

Theoretical and Computational Physics, Mathematical Physics &

Engineering

### ADDITIONAL INFORMATION: