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Research Paper published in Journals:

1. Supersymmetric WKB Tunneling through Triple Finite Square Barrier and Quality of SWKB Quantization Condition: S. Mahapatra and T. K. Das, Mod. Phys. Lett. **A20**, 1541 (2005).
2. Low-lying states of ^{11}Be and ^{15}C: S. Mahapatra, Indian Jour. of Phys. **81(7),** 697 (2007).
3. Low-lying $\frac{5^+}{2}$ resonance in ^{11}Be: bound state in the continuum: S. Mahapatra, T. K. Das and S. K. Datta, International Jour. of Mod. Phys. **E18,** 1741 (2009).
4. On the algebraic derivation of phase shifts for shape invariant potentials: S. Mahapatra and T. K. Das, Mod. Phys. Lett. **A26,** 1753 (2011).
5. Low-lying resonance state of ^{15}C: Application of Supersymmetric Quantum Mechanics: S. Mahapatra, Few-body systems **52,** 1 (2012).
6. Phase shift between Supersymmetric Partner Potentials: S. Mahapatra, Jour. of Mod. Phys. **3,** 74 (2012).
7. Tunneling through Double Finite Barrier: Application of WKB Approximation: S. Mahapatra, Jour. of the Institution of Chemists (India), **87(5),** 117 (2015).
8. Validity of Phase Shift Relation for Supersymmetric Partner Potentials: S. Mahapatra, Jour. of Scientific and Engineering research **3(2),** 193 (2016).
9. Phase Shift of Isospectral Potentials: S. Mahapatra, Jour. of Physical Studies **21(1)**, 1002 (2017).

Papers presented in National/ International Conferences:

1. Computation of $\frac{3^+}{2}$ resonance in ^{15}C: bound state in the continuum: S. Mahapatra, *Indian Science Congress* (2011).
2. Supersymmetric Partner Potentials and their Phase Shift relation: S. Mahapatra, *Indian Science Congress* (2013).
3. Isospectral Potentials and their Phase Shift relation: S. Mahapatra, *Indian Science Congress* (2015).
4. Tunneling through double finite barrier: S. Mahapatra, *Recent trends in Functional Materials in relation to Nanomaterials and Nanotechnology (RTFMNN)* organized by St. Paul's C. M. College in collaboration with Indian Chemical Society, Kolkata and sponsored by UGC (2016).

Research Projects:

1. UGC sponsored Minor Research Project entitled "Some Applications of Supersymmetric Quantum Mechanics in realistic Problems in Physics" (2006–08).
2. UGC sponsored Minor Research Project entitled "Phase shift of Isospectral potentials" (2014–16).