1154-81-2497   **Jamal Benbourenane*** (`jamal.benbourenane@adu.ac.ae`), Abu Dhabi University, College of Art and Science, Abu Dhabi, United Arab Emirates. *PT-Symmetric Systems with Real Valued Complex Potential and their Exactly Solvable wave functions and Positive Energies.*

We propose a new technique based on double scaling and using supersymmetry quantum mechanics (susyqm) in order to study PT-Symmetric systems described by one dimensional Schrodinger equation with some specific complex potential. PT-symmetric systems are known to be used as models for quantum open systems where the gain and loss are balanced. Even though the potential is complex in such systems, the eigenenergies obtained are real. We determine more specifically the exact closed forms of the wave functions and the energies of the bounded states for the complex valued potential with its superpotential given as a linear combination of hyperbolic functions. (Received September 17, 2019)