

Abstract Submitted
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Teichmüller Space Interpretation of Quantum Mechanics FRIEDWARDT WINTERBERG, University of Nevada Reno — As Newton's mysterious action at a distance law of gravity was explained as a Riemannian geometry by Einstein, it is proposed that the likewise mysterious non-local quantum mechanics is explained by the analytic continuation below the Planck length into a complex Teichmüller space. Newton's theory worked extremely well, as does quantum mechanics, but no satisfactory explanation has been given for quantum mechanics. In one space dimension, sufficient to explain the EPR paradox, the Teichmüller space is reduced to a space of complex Riemann surfaces. Einstein's curved space-time theory of gravity was confirmed by a tiny departure from Newton's theory in the motion of the planet Mercury, and an experiment is proposed to demonstrate the possible existence of a Teichmüller space below the Planck length.

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