1077-12-1171 **Zbigniew Hajto*** (zbigniew.hajto@uj.edu.pl), Faculty of Mathematics and Computer Science, Jagiellonian University, ul. Lojasiewicza 6, 30-348 Krakow, Poland, and **Teresa Crespo** and **Elzbieta Sowa**. *Real Picard-Vessiot theory*.

For a given linear differential equation defined over a real differential field with real closed field of constants, we prove that there exists a Picard-Vessiot extension which moreover is a real field. For such a Picard-Vessiot extension, we present a Galois correspondence theorem. (Received September 17, 2011)