



## **ON THE REPRODUCING KERNEL HILBERT SPACES AND APPLICATIONS**

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### **Abstract**

Reproducing Kernel Hilbert Space (RKHS) provide a very interesting mathematical tool to resolve a lot of problems in numerical analysis. In these spaces, the approximate solutions of ODE or PDE are developed with a very good convergence. Also in general interpolation problem, some tools have been developed. Our aim is to investigate some problems of numerical analysis (integral equations, boundary value and interpolation problems) which solutions have been approximate in Reproducing Kernel Hilbert Space.

**Keywords and phrases:** reproducing Kernel Hilbert spaces, integral equations, boundary value problem and interpolation.

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