1046-01-1918 **M ZUHAIR NASHED*** (znashed@mail.ucf.edu), Department of Mathematics, University of Central Florida, Orlando, FL 32816. *Landmarks and Trails in the Development of Differential Calculus in Normed and Function Spaces.*

Differential Calculus in infinite dimensional spaces was developed along two schools. In the first school (Gateaux, Frechet, Levy, Hadamard)the "differential" was viewed as an element of an abstract space and the "derivative" as an operator, usually linear and continuous. In the second school (Volterra, von Mises) the approach was to generalize partial derivative (as a number) leading to the Volterra's concept of variational or functional derivative. We trace of the landmarks and trails in these developments, the emergence of the notion of "gradient" in function spaces, and failed and successful attempts to find the proper notions of derivaive in topological spaces. (Received September 16, 2008)