

1086-01-1598 **Sandro Caparrini*** (caparrini@libero.it), Sandro Caparrini, via Simeto, 3, 10043 Orbassano, Torino, Italy. *Who discovered vector calculus? The case of Domenico Chelini (1802-1878)*.

According to history books, vector calculus was invented by J. W. Gibbs and O. Heaviside (late 1870s) as a simplification of W. R. Hamilton's quaternions (1843). However, a closer look at the primary sources reveals that there were a number of mathematicians working on vector methods in mechanics and geometry during the first decades of the 19th century. We will consider the case of the Italian mathematician Domenico Chelini (1802-1878), who published a primitive formulation of elementary vector calculus as early as 1838 and applied it to differential geometry and mechanics in several papers. (Received September 23, 2012)