1046-40-1825 **Mihaela Dobrescu*** (mihaela.dobrescu@cnu.edu), 1 University Place, Math Dept, Newport News, VA 23606. *A new look at the convergence of a famous sequence.* Preliminary report.

The first known references to e were found in a work of John Napier from 1618, where e does not show up explicitly, but in a list of logarithms written in an appendix probably by William Oughtred. Jacob Bernoulli is the one believed to have found the constant itself while attempting to find the limit $\lim_{n\to\infty}(1+\frac{1}{n})^n$. Gottfried Leibniz and Christiaan Huygens have used the constant around 1690 representing it by the letter b. Finally Leonhard Euler publishes his work *Mechanica* in 1736 and the constant gets its name, e.

Most of the today calculus books define e as being the positive real number such that $\ln e = \int_1^e \frac{1}{t}dt = 1$. Starting from this definition, we give a new proof for the convergence of $\{(1+\frac{1}{n})^n\}_n$ as a particular case of a family of sequences $\{(1+\frac{1}{n})^{n+\epsilon}\}_n$ converging to e. We believe that the new proof of the monotonicity of this family of sequences will be one accessible to students in their first semester of calculus. (Received September 16, 2008)