**Year: 2017** | **Vol.: 91** | **Fasc.: 1-2**

**Title:** Conformal vector fields on submanifolds of a Euclidean space

**Author(s):** Hanan Alohali, Haila Alodan and Sharief Deshmukh

In this paper, we investigate $n$-dimensional immersed compact submanifold $M$ of a Euclidean space $R^{n+p}$, with the immersion $\psi : M \to R^{n+p}$, where the tangential component $\psi^T$ of $\psi$ is a conformal vector field. A characterization of $n$-sphere in the Euclidean space $R^{n+p}$ is obtained. Also conditions under which $\psi^T$ is a conformal vector field in the general case and those in the special case where the submanifold has flat normal connection and $p = 2$ are obtained as well.

**Address:**
Hanan Alohali
Department of Mathematics
College of Science
King Saud University
P. O. Box-2455
Riyadh-11451
Saudi Arabia

**Address:**
Haila Alodan
Department of Mathematics
College of Science
King Saud University
P. O. Box-2455
Riyadh-11451
Saudi Arabia

**Address:**
Sharief Deshmukh
Department of Mathematics
College of Science
King Saud University
P. O. Box-2455
Riyadh-11451
Saudi Arabia