

THE MINIMUM NUMBER OF UNTRANSVERSAL POINTS
OF THE MAPPINGS $M \rightarrow E$ WITH THE FIBERS
OF A SUBMERSION $p : E \rightarrow N$

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Abstract. Let E, M, N be differentiable manifolds such that $\dim M, \dim E \geq \dim N$, $p : E \rightarrow N$ be a submersion and $f : M \rightarrow E$ be a differential application. In this paper we prove that f intersects transversally the fiber $p^{-1}(p(f(x)))$, in $x \in M$, if and only if x is a regular point of the mapping $p \circ f$. Using this result and some other results proved in certain previous papers, we give some sufficient topological conditions on the manifolds M, N in order that any mapping $M \rightarrow E$ has infinitely many untransversal points with the fibers of the submersion $p : E \rightarrow N$.

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