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## Abstracts of Short Communications and Posters

### Section:

## 6. Topology

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**A Generalization of The Haefliger-Weber Theorem On Embeddings of Manifolds in $\mathbb{R}^m$**

We improve the PL case of the Haefliger-Weber theorems on immersions and embeddings. Let $N$ be a $(3n-2m+2)$-connected $n$-manifold and $m-n \geq 3$.
**Theorem.** Suppose that $N$ is smooth and either closed or $\partial N \cong S^{n-1}$, respectively. If there exists an equivariant map $F : \tilde{N} \to S^{m-1}$, then there exists either PL or smooth, respectively, embedding $f : N \to \mathbb{R}^m$.
**Theorem.** If $N$ is closed PL, $h : N \to \mathbb{R}^m$ is a PL immersion and $F : \tilde{N} \to S^{m-1}$ is an equivariant map such that $\tilde{h}|_{O\Delta-\Delta} \simeq_{eq} F|_{O\Delta-\Delta}$ for some neighborhood $O\Delta$ of the diagonal $\Delta$ in $N \times N$, then there is an embedding $f : N \to \mathbb{R}^m$.
Here $\tilde{N} = \{(x, y) \in N \times N | x \neq y\}$, for a PL immersion (i. e. local embedding) $h : N \to \mathbb{R}^m$ and sufficiently small neighborhood $O\Delta$ of the diagonal $\Delta$ in $N \times N$, the equivariant map $\tilde{h} : O\Delta - \Delta \to S^{m-1}$ is well-defined by $h(x, y) = \frac{hx-hy}{|hx-hy|}$. We also prove isotopy versions of the above theorems.