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# Correction to the Paper "On Irresolute Topological Vector Spaces-II"

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**Abstract** In the published paper [1], Theorem 3.26, Theorem 3.27 and Theorem 3.30 are not correct. Here we give an authentic refutation of these theorems.

***Keywords:*** *semi-open sets, irresolute topological vector spaces.*

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## 1. Refutation of [[1], Theorem 3.26, Theorem 3.27, Theorem 3.30]

We first illustrate a counterexample for [[1], Theorem 3.26]. Consider the example [[2], Example 2]. Let

$$A=\{-\frac{1}{n}: n\in \mathbb{N}_e\}\cup\{\frac{1}{m}: m\in \mathbb{N}_o\},$$

where $\mathbb{N}_e$ denotes the set of even natural numbers and $\mathbb{N}_o$ denotes the set of odd natural numbers. Then $Int(Cl(A))=\emptyset$ and hence $A$ is semi-closed set in $X=\mathbb{R}$. Let $U=A^c$, the complement of $A$. Then $U\in\mu_0$, the collection of all semi-open neighborhoods of $0$ in $X=\mathbb{R}$, but there does not exist $V\in\mu_0$ such that $sCl(V)\subseteq U$ because for any $V\in\mu_0$, $sCl(V)$ contains an interval of the form $(a,0]$, $(a,b)$ or $[0,b)$ for some $a<0<b$.

Using the same example, we now refute [[1], Theorem 3.27]. Let $U=[0,1)$. Then $U\in\mu_0$ but there does not exist balanced $W\in\mu_0$ such that $W\subseteq U$. Hence, [[1], Theorem 3.27] is not correct.

Finally, refuting [[1], Theorem 3.30]. Consider [[2], Example 2]. Let $U=[0,1)$ and $r_n=n, n\in\mathbb{N}$, the set of natural numbers. Then $U$ and $r_n$ satisfy the hypothesis of [[1], Theorem 3.30] but $\cup_{n=1}^{\infty} r_n U\neq X$.

## References

[1] M.A. Iqbal, M.M. Gohar and M.D. Khan, *On Irresolute Topological Vector Spaces-II*, Turkish Journal of Analysis and Number Theory, 4(2) (2016), 35-38.

[2] M.D. Khan and M.A. Iqbal, *On Irresolute Topological Vector Spaces*, Adv. Pure Math. 6(2016), 105-112.

[3] M. Ram and S. Sharma, *Corrigendum to: On Irresolute Topological Vector Spaces*, New Trends in Mathematical Sciences, 6(4) (2018), 40-44.