

Corrigendum

Corrigendum to “Soft α -Open Sets and Soft α -Continuous Functions”

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In the paper titled “Soft α -Open Sets and Soft α -Continuous Functions” [1, Example 14], the authors deduced that τ is a soft topology over $X = \{h_1, h_2, h_3, h_4\}$ with respect to $E = \{e_1, e_2, e_3\}$. In fact, their conclusion is not true. For example, the soft sets (F_1, E) and (F_2, E) are in the collection τ but their soft intersection and soft union do not belong to it. It follows that all examples based on Example 14 also are incorrect. The examples of [1] can be replaced by the following accurate examples.

Example 1. Let $X = \{h_1, h_2, h_3\}$, $E = \{e\}$, and $\tau = \{\tilde{\emptyset}, \tilde{X}, (F, E)\}$ is a soft topology over X with respect to E , where (F, E) is a soft set over X defined by $F(e) = \{h_1\}$. Then the soft set (G, E) defined by $G(e) = \{h_1, h_2\}$ is soft α -open set but not soft open set.

Example 2. Let $X = \{h_1, h_2, h_3\}$, $E = \{e\}$, and $\tau = \{\tilde{\emptyset}, \tilde{X}, (F_1, E), (F_2, E), (F_3, E)\}$ is a soft topology over X with respect to E , where (F_1, E) , (F_2, E) , and (F_3, E) are soft sets over X defined as follows:

$$\begin{aligned} F_1(e) &= \{h_1\}, \\ F_2(e) &= \{h_2\}, \\ F_3(e) &= \{h_1, h_2\}. \end{aligned} \quad (1)$$

Then the soft set (G, E) defined by $G(e) = \{h_1, h_3\}$ is soft semiopen set but not soft α -open set.

Example 3. Let $X = \{h_1, h_2, h_3\}$, $E = \{e_1, e_2\}$, and $\tau = \{\tilde{\emptyset}, \tilde{X}, (F_1, E), (F_2, E), (F_3, E)\}$ is a soft topology over X with respect to E , where (F_1, E) , (F_2, E) , and (F_3, E) are soft sets over X defined as follows:

$$\begin{aligned} F_1(e_1) &= \{h_1\}, \\ F_1(e_2) &= \{h_2, h_3\}, \\ F_2(e_1) &= \{h_2\}, \\ F_2(e_2) &= \{h_1\}, \\ F_3(e_1) &= \{h_1, h_2\}, \\ F_3(e_2) &= X. \end{aligned} \quad (2)$$

Then the soft set (G, E) defined by

$$\begin{aligned} G(e_1) &= \emptyset, \\ G(e_2) &= \{h_1\} \end{aligned} \quad (3)$$

is soft preopen set but not soft α -open set.

Example 4. (1) Let $f : (X, \tau, E) \rightarrow (Y, \nu, K)$ be an injective soft function from an indiscrete soft topological space (X, τ, E) into discrete soft topological space (Y, ν, K) . Then f is soft precontinuous function but not soft α -continuous.

(2) Let $X = \{h_1, h_2, h_3\}$ be the initial universe and $E = \{e\}$, $K = \{k\}$ are the parameters sets. If $\tau =$