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**Editor-in-Chief**  
*Neural Networks*

Dear Editor,

Please find enclosed our manuscript, "FAIR: Fair Adversarial Instance Re-weighting" by Andrija Petrović, Mladen Nikolić, Sandro Radovanović, Boris Delibasić, and Miloš Jovanović, which we would like to submit for publication in *Neural Networks*.

In this paper we propose a Fair Adversarial Instance Re-weighting (FAIR) method, which uses adversarial training to learn instance weighting function that ensures fair predictions. The proposed method inherits desirable properties from both – interpretability of reweighting and end-to-end trainability of adversarial training. We propose four different variants of the method and, among other things, demonstrate how the method can be cast in a fully probabilistic framework. Additionally, theoretical analysis of FAIR models' properties have been studied extensively. We compare FAIR models to 7 other related and state-of-the-art models and demonstrate that FAIR is able to achieve a better trade-off between accuracy and unfairness. To the best of our knowledge, this is the first model that merges reweighting and adversarial approaches by means of a weighting function that can provide interpretable information about fairness of individual instances.

In order to comply with article policy, as a corresponding author on behalf of all the authors I would like to confirm that the manuscript has not been published elsewhere, accepted for publication elsewhere or under editorial review for publication elsewhere; and that my Institute's (University of Belgrade) representative is fully aware of this submission. Additionally, I confirm that instructions for authors of this journal have been read carefully and that the manuscript complies to all points.

Thank you for your consideration.

Sincerely,

**Andrija Petrovic**