# Review for "Correlated Uncertainty for Learning Dense Correspondences from Noisy Labels"

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October 2020

## Abstract

The paper describes an issue of the limitations of manual annotation in the case of establishing dense visual correspondences between images. It was addressed by augmenting neural networks with the ability to estimate a distribution over the correlated annotation field, thus explicitly and introspectively capturing the uncertainty in the annotations. As the result it presents a mathematical framework that estimates uncertainty of dense correspondences from noisy labels.

## Review

The paper is readable and well-organised, everything is made very clear. However, I have a few concerns about the paper. Firstly, you said that "$q(\delta|x)$ is an unbiased distribution of the residual $\delta$ (i.e. $E[q(\delta|x)] = 0$ and ...)". Maybe it should be $E[\delta] = 0$. Secondly, why do noises from (3) have Gaussian distribution? If these noises are really distributed like that, then it's should be shown in the paper. And the last one, i think it'll be better if you put sections **Metrics**, **Implementation details**, **Uncertainty models** at the beginning of the section **Experiments** before the tables, because it will be easier to understand what you use to estimate the model.
Overall, the work offers the great way, which shows satisfying performance, to deal with the problem.