Reviewer 1:

In this work, the authors present a drone equipped with sensing modalities for seismic surveying. Arguing that current methods for seismic surveying are expensive and in some cases non feasible, the authors integrated four geophone sensors to a quad-copter. The authors evaluated their sensing system under different criteria and concluded that the idea of having an autonomous system for seismic surveying is feasible.

The idea presented by the author is innovative and certainly interesting. To my best knowledge there are few (if any) work related to seismic surveying with a mobile platform. Rather than presenting their work as a finished platform, the authors describe their work as a proof of concept that demonstrate the idea of an autonomous seismic surveying system. As such, I would recommend this paper for publication. However, there are several issues that has to be explained before accepting this paper for publication.

Reviewer 2:

The authors present a system to be mounted on a drone able to record seismic data by means of geophone sensors. The idea is interesting and promising. The English is generally correct and the explanations are clear but some change should be made.

In general the paper is interesting, more detail should be provided indeed on the functioning of the system to make it a solid conference paper.

Reviewer 3:

The paper presents pilot work to establish the feasibility of using drones for seismic surveying. The experiments, results, and system implementation are adequate to warrant further research in the field. The chief novelty seems to be in the application area.

Section 1: Easy to fix

1. The paper should be thoroughly reviewed in order to correct typos, structural and editing errors. For example the authors should place all their future work directions at the end of the paper instead of spreading them all over the manuscript.(R1)
2. At the end of the introduction there is a long repetition of text already presented in the abstract. Please avoid repetitions.(R2)
3. There is a lack of references on robotic systems for environmental and scientific measurements, for instance in ["Towards Smart Farming and Sustainable Agriculture with Drones", Proceedings of the Intelligent Environments conference 2015] a drone is used for agricultural measurements.(R2)
4. In equation 4 there is no gravitational contribution as reported in the text. (R2)
5. Reference 11 should be avoided and if needed inserted as a note.(R2)

Section 2: Reasonable to fix

1. Is it the use of a fleet of seismic drones cost effective compared to state of the art seismic surveying techniques? I am not so sure about this statement. Drones are rather expensive devices and moreover, they need at least some experts to operate them. Can the authors elaborate on this point? (R1)
2. The fact that the seismic drone could not penetrate a dry clay surface is in my opinion an important limitation of the system. I consider that the authors should explain in the conclusions how do they plan to address this limitation in future work. (R1)
3. The evaluation of the acquired seismic is another weak point of this paper. If I understood the text correctly, a well planted geophone is the benchmark of the comparison. However, it is not clear how the waveform recorded by the seismic drone is comparable to a well planted geophone. It can be seen in figure that the waveform from the seismic drone keeps oscillating for a comparatively long period of time. More explanation is required related to this point. From the Figure 8, it is hard to understand how the seismic drone is comparable to a well planted geophone. (R1)

In experiment 1 the results of the first experiment show that after 120 seconds there are still relevant oscillation read from the drone compared to the good and satisfactory planted geophones. The same is visible also at the lower lines in figure 9. The authors should explain if this affect the final survey or not. (R2)

1. The conclusion sections is poorly written. Since the paper describes the first results of a proof of concept prototype, the authors should elaborate deeply about future work directions. There are several aspects that are not mentioned for example, sensor planning for seismic surveying, quantitative evaluation of the waveforms acquired with the seismic drone (compared to e.g. a well planted geophone), autonomous exploration, addressing the problem of planting the probes in harder surfaces (e.g. dry clay), coordination and planning for fleets of seismic drones.(R1)
2. In the abstract the authors say that the proposed mechanical system provides a stable landing attitude but it is not clear how it is achieved.(R2)
3. While some description of the challenges in this field are stated, a more detailed set of requirements for a field system would make a stronger argument for widespread use of drones in this field.(R3)

Section 3: Hard to fix (Journal Version)

1. The major problem with the presented system is the ability to properly insert the spikes on the terrain surface. The authors say that the system work in "soft soil", a more detailed study should be performed with quantitative results. In particular the only force to perform the landing is the gravitational force given the fact that the rotor blades can generate a force only on the opposite direction.(R2)
2. In the accuracy experiment it is not clear how the control in the drone operates and which sensors are used. In particular if the GPS has an accuracy of 5 meters, 1 or 2 m error are both inside the accuracy of the system. For sure a better clarification on the position error control should be provided and maybe a visual slam or visual features should be used to reduce the error.(R2)
3. I would also suggest further surveys and signal analysis be conducted, and perhaps additional experiments exploring the limits of the utility as well as the feasibility be considered. If possible, these could be added to the paper prior to its publication.(R3)