# Part I

# Conclusion and Recommendations

# Conclusion

Acoustic emission testing proved to be valuable in ensuring the structure integrity, and monitoring the health status of different bodies, e.g. wind turbine Blade.
The localization part of the acoustic emission is very interesting. It opens the doors to implement and test different optimization algorithms. Some are subtitle for lower computational resources , some convergences quickly, and so on . We can even blend some together to get the desired solution. Also, some techniques can be formulated from the scratch to fit the problem nature, like Delta-T mapping. As we say "All roads lead to Rome", but the important question still is *"when this method shall be used"*.

# Recommendations

My recommendations for whom is going to work in similar project can be summarized in the following points:

- Hybrid algorithms tend to be more stable and converge fast.
- Implement simulated annealing or genetic algorithm, both have great performance.
- Tweak the AIC to take less time or implement a similar method.
- Implement a more structured noise filter for attenuation data.
- Avoid many loops which affects the software performance.