# Article information:

Robust source-independent elastic full-waveform inversion in the time domain | GEOPHYSICS  
<https://library.seg.org/doi/10.1190/geo2015-0073.1>

# Article summary:

1. Full-waveform inversion (FWI) is a powerful tool for obtaining high-resolution results from wide-aperture multicomponent seismic data.

2. Conventional FWI relies on an assumption of knowing the true source wavelet, which is difficult to obtain accurately in practice.

3. Source-independent FWI techniques have been proposed, including iterative estimation of source signature, deconvolution-based methods, and convolution-based methods.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides a comprehensive overview of robust source-independent elastic full-waveform inversion in the time domain as applied to geophysical exploration. The article is well written and provides a clear explanation of the various techniques used for source-independent FWI, as well as their advantages and disadvantages. The authors provide evidence to support their claims and cite relevant research papers throughout the text.

The article does not appear to be biased or one-sided; it presents both sides of the argument fairly and objectively. It also does not contain any promotional content or partiality towards any particular technique or method. However, there are some points that could be explored further such as potential risks associated with each technique and how they can be mitigated, as well as counterarguments that could be presented to provide a more balanced view of the topic. Additionally, while the authors do mention noise sensitivity when discussing certain techniques, they do not provide any evidence or examples to illustrate this point further.

# Topics for further research:

* Robust source-independent FWI noise mitigation
* Time-domain elastic full-waveform inversion applications
* Advantages and disadvantages of source-independent FWI
* Risk assessment for source-independent FWI
* Counterarguments for source-independent FWI
* Noise sensitivity of source-independent FWI

# Report location:

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