*Tentatively in Computer and Geosciences*

Core ideas

* Propose an open source and generic algorithm to invert current source density in Mise-à-la-Masse prospection
* Model appraisal and uncertainties
* Show the application of the algorithm on three different contexts: plant root imaging, landfill leakage and salt intrusion monitoring
* Address pip to download the open source python package “pyMALM”: *coming soon*

**A generic current source inversion algorithm for Mise-à-la-masse prospection**

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1. [Keywords](https://www.sciencedirect.com/science/article/pii/S0098300419308192#kwrds0010): Mise-à-la-masse, inversion, ERT, curent density

[Abstract](https://www.sciencedirect.com/science/article/pii/S0098300419308192#abs0010)

INtroduction

2. Structure of the code

3. Applications

## Root system imaging case

## A landfill leakage case

## Salt intrusion monitoring case

4. Conclusion

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References

All binley’s old contributions

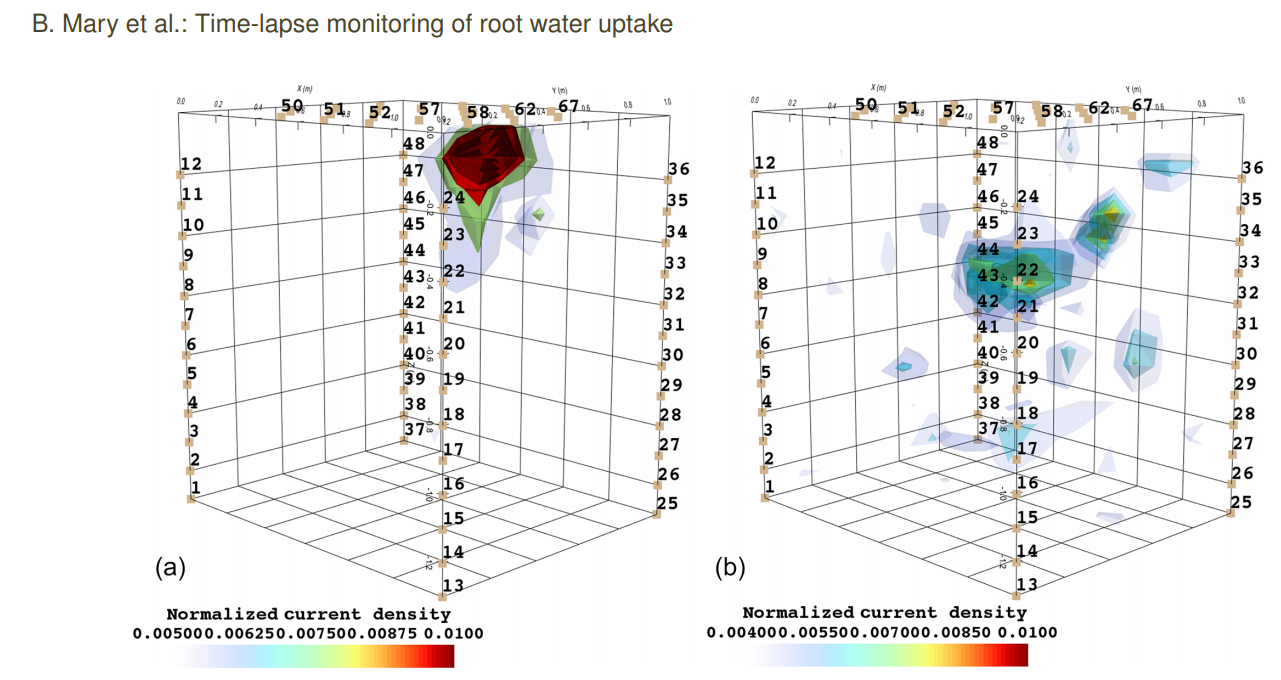
Recent paper of Blanchy and pygimli team

Paper Revil

Papier Maria Theresa

Papier Abdoulsamad et al 2019 leak in a dam

FIGURES



Figure

Figure 1: application on root system

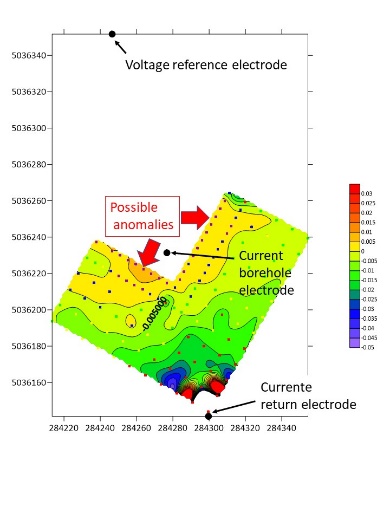


Figure 2: application on a 3d landfill leakage (*Landfill Porto Marghera – keep the field site confidential)*. The ICSD shows all its usefulness when the remote electrodes are not enough distant and pollute the signal

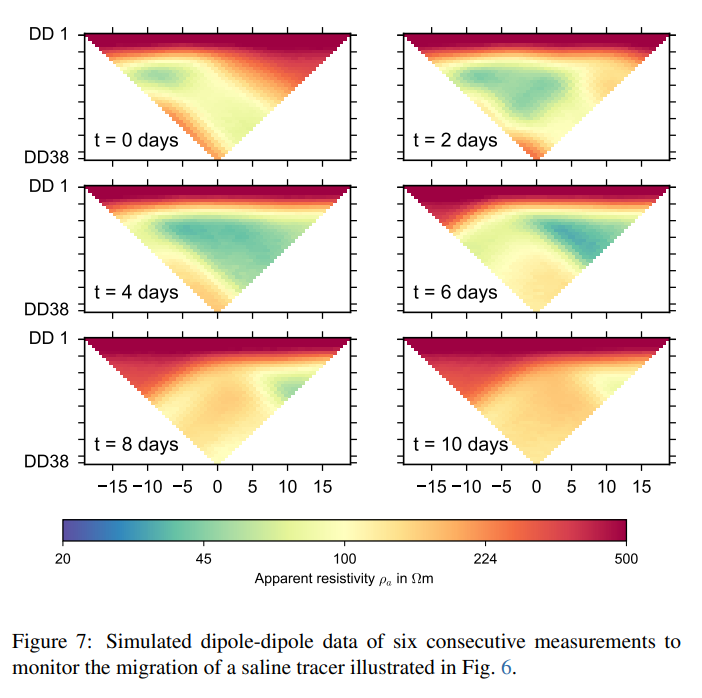
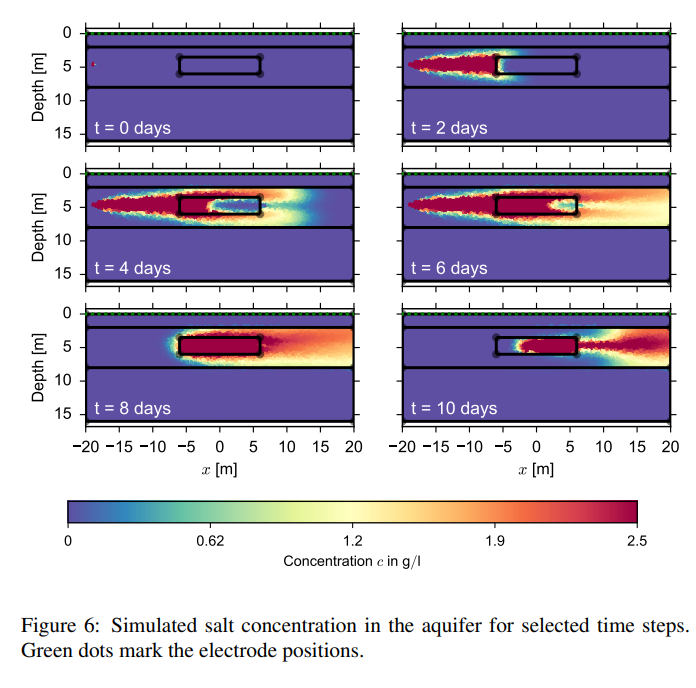
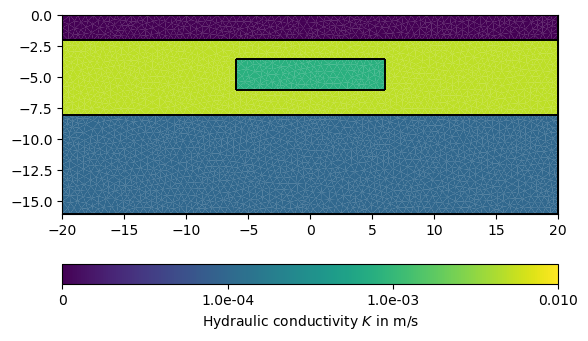


Figure 3 : Time-lapse ERT simulation measurements During a Saline Tracer Injection. *(figure 2d synthetic generated with pygimli – see article pygimli)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Initial resistivity model | Votage distribution | Current density |
| T1 |  |  |  |
| T3 |  |  |  |
| T6 |  |  |  |

Figure 4 : Time-lapse MALM Measurements During a Saline Tracer Injection.