

RECENTRE REal-time motion CorrEction in magneTic Resonance

PRIN PNRR Prot. P202294JHK

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MAGNETIC RESONANCE

- non-invasive investigation for tissue structure and function
- but ***motion artifacts*** pose a significant limitation

OUR PROJECT

- real-time motion correction
- idea: ***deep learning*** already used in HEP algorithms

DATASET

- Human Connectome Project (HCP)
- 1113 Subjects with Simenes 3 Tesla x3 (**RS**, **WM**, **L**)

APPROACH

- Recurrent Neural Network (**RNN**)
- Gated Recurrent Unit (**GRU**), simpler version of a LSTM



Bibliography?
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Acknowledgement

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which enabled this research and its presentation.

1 Università degli Studi di Napoli Federico II
2 Istituto di Fisica Nucleare
3 Sapienza Università di Roma

4 Centro Ricerche Enrico Fermi
5 Consiglio Italiano delle Ricerche
6 Istituto Superiore di Sanità

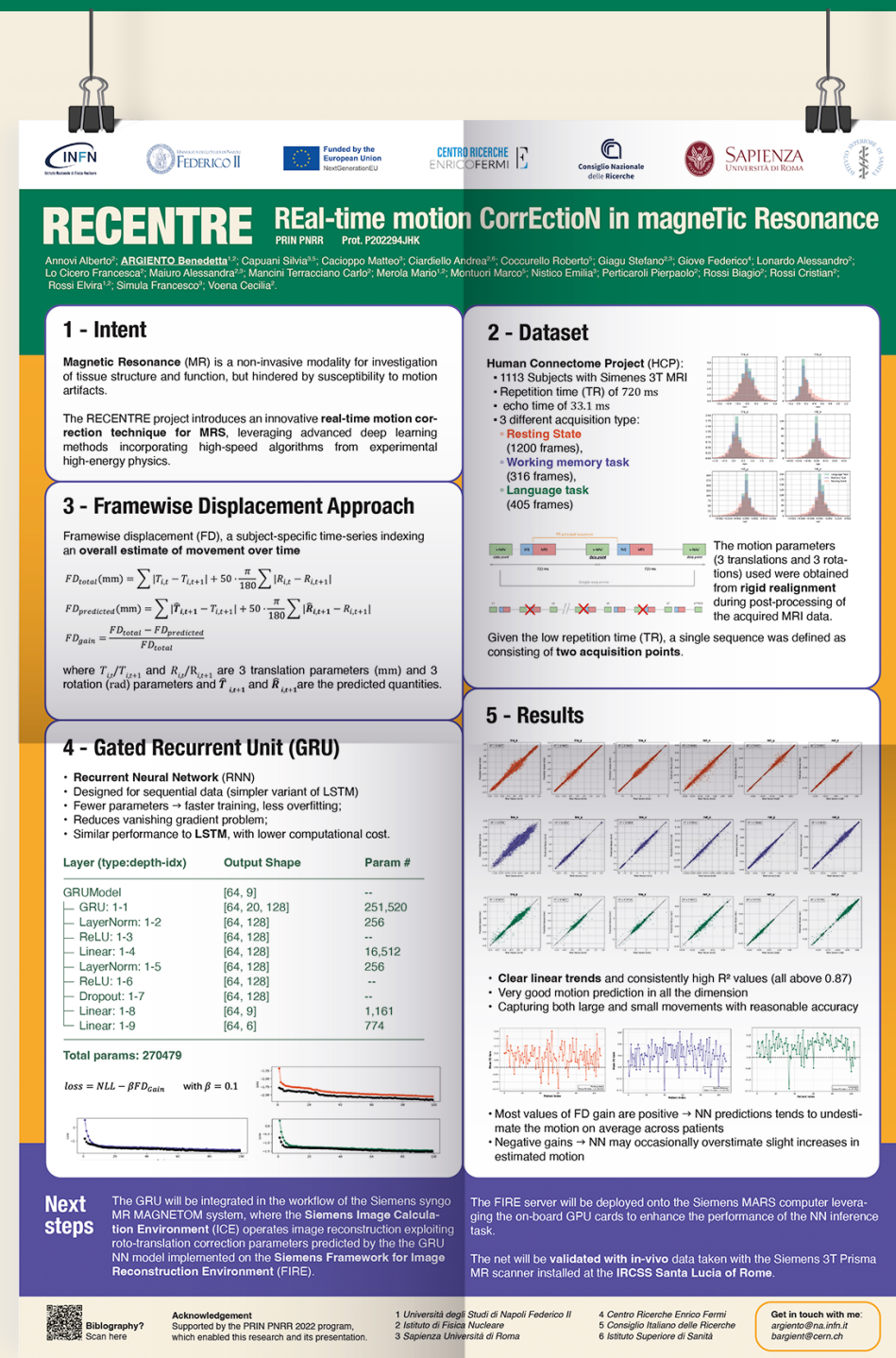
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OUR PROGRESS SO FAR?

Promising results, with more to come!

No spoilers here, visit **poster #87** on Thursday



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