		doc_1		doc_2	decision	id
cases	authors	- Bucci, Michele-Alessandro - Charpiat, Guillaume - Faney, Thibault - Gratien, Jean-Marc - Nastorg, Matthieu - Schoenauer, Marc	authors	- Matthieu Nastorg M. Schoenauer G. Charpiat T. Faney J. Gratien M. Bucci	DUPLICATES	179
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	id	id7868033305651603007	id	id4179997520220816483		
	abstract	International audienceThis paper proposes a novel Machine Learning-based approach to solve a Poisson problem with mixed boundary conditions. Leveraging Graph Neural Networks, we develop a model able to process unstructured grids with the advantage of enforcing boundary conditions by design. By directly minimizing the residual of the Poisson equation, the model attempts to learn the physics of the problem without the need for exact solutions, in contrast to most previous data-driven processes where the distance with the available solutions is minimized	abstract	This paper proposes a novel Machine Learning-based approach to solve a Poisson problem with mixed boundary conditions. Leveraging Graph Neural Networks, we develop a model able to process unstructured grids with the advantage of enforcing boundary conditions by design. By directly minimizing the residual of the Poisson equation, the model attempts to learn the physics of the problem without the need for exact solutions, in contrast to most previous data-driven processes where the distance with the available solutions is minimized.		
	versions		versions			