cases	doc_1		doc_2		decision	id
	authors	• Bucci, Michele-Alessandro • Charpiat, Guillaume • Faney, Thibault • Gratien, Jean-Marc • Nastorg, Matthieu • Schoenauer, Marc	**authors**	• Matthieu Nastorg • Marc Schoenauer • Guillaume Charpiat • Thibault Faney • Jean-Marc Gratien • Michele-Alessandro Bucci	DUPLICATES	178
	title	DS-GPS : A Deep Statistical Graph Poisson Solver (for faster CFD simulations)	**title**	DS-GPS : A Deep Statistical Graph Poisson Solver (for faster CFD simulations)		
	publication_date	2022-12-03 00:00:00	**publication_date**	2022-11-21 16:16:10+00:00		
	source	SupportedSources.CORE	**source**	SupportedSources.ARXIV		
	journal		**journal**	Machine Learning and the Physical Sciences workshop, NeurIPS 2022, Dec 2022, New-Orleans, United States		
	volume		**volume**			
	doi	None	**doi**			
	urls	• https://core.ac.uk/download/543851383.pdf	**urls**	• http://arxiv.org/pdf/2211.11763v1 • http://arxiv.org/abs/2211.11763v1 • http://arxiv.org/pdf/2211.11763v1		
	id	id7868033305651603007	**id**	id3175817995925976621		
	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**			