cases	doc_1	doc_2	decision	id
			DUPLICATES	223

doc_1	
authors	• Yingxing Fang • Gang Wu • Yue-Yue Wang • C. Dai
title	Data-driven femtosecond optical soliton excitations and parameters discovery of the high-order NLSE using the PINN
publication_date	2021-03-30 00:00:00
source	SupportedSources.SEMANTIC_SCHOLAR
journal	Nonlinear Dynamics
volume	105
doi	10.1007/s11071-021-06550-9
urls	• https://www.semanticscholar.org/paper/8785cdb7137590c668dc882f76cd803e4964e0f1
id	id1234767661177927755
abstract	None
versions	

doc_2	
authors	• Yin Fang • Gang-Zhou Wu • Yue-Yue Wang • Chao-Qing Dai
title	Data-driven femtosecond optical soliton excitations and parameters discovery of the high-order NLSE using the PINN
publication_date	2021-03-30 12:47:09+00:00
source	SupportedSources.ARXIV
journal	None
volume	
doi	
urls	• http://arxiv.org/pdf/2103.16297v1 • http://arxiv.org/abs/2103.16297v1 • http://arxiv.org/pdf/2103.16297v1
id	id2875627921565411411
abstract	We use the physics-informed neural network to solve a variety of femtosecond optical soliton solutions of the high order nonlinear Schr\"odinger equation, including one-soliton solution, two-soliton solution, rogue wave solution, W-soliton solution and M-soliton solution. The prediction error for one-soliton, W-soliton and M-soliton is smaller. As the prediction distance increases, the prediction error will gradually increase. The unknown physical parameters of the high order nonlinear Schr\"odinger equation are studied by using rogue wave solutions as data sets. The neural network is optimized from three aspects including the number of layers of the neural network, the number of neurons, and the sampling points. Compared with previous research, our error is greatly reduced. This is not a replacement for the traditional numerical method, but hopefully to open up new ideas.
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