

## Numerical Heat Transfer, Part A: Applications &gt;

An International Journal of Computation and Methodology

Volume 74, 2018 - Issue 4

418 | 6 | 0  
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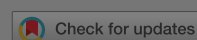
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# Development of multilayer perceptron artificial neural network (MLP-ANN) and least square support vector machine (LSSVM) models to predict Nusselt number and pressure drop of TiO<sub>2</sub>/water nanofluid flows through non-straight pathways

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Pages 1190-1206 | Received 01 May 2018, Accepted 27 Aug 2017, Published online: 17 Oct 2018

Cite this article https://doi.org/10.1080/10407782.2018.1523597



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## Abstract

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Helical number (106.80 to 1282.87) were introduced to the developed models to obtain Nusselt number (9.89 to 53.30) and pressure drop (291.35 to 18784 kPa) as the output data of the models. According to the output results of developed models, MLP-ANN model was able to predict both Nusselt number and pressure drop of nanofluid flow more precisely in comparison to LSSVM model. The developed MLP model of this study exceeded LSSVM model to high correlation coefficient value of 0.97.

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