



A Bayesian Regularized Artificial Neural Network for Up-Scaling Wind Speed Profile

Submitted by Abdérafi Charki on Sun, 02/25/2018 - 16:27

Titre	A Bayesian Regularized Artificial Neural Network for Up-Scaling Wind Speed Profile
Type de publication	Article de revue
Auteur	Aghbalou, Nihad [1], Charki, Abderafi [2], Rahali El Azzouzi, Saida [3], Reklaoui, Kamal [4]
Editeur	INPRESSCO
Type	Article scientifique dans une revue à comité de lecture
Année	2017
Langue	Anglais
Date	Nov-Déc. 2017
Numéro	6
Pagination	2096-2103
Volume	7
Titre de la revue	International Journal of Current Engineering and Technology
ISSN	2277-4106,
Mots-clés	Bayesian regularization [5], Neural network [6], Wind energy [7], Wind speed profile [8]
Résumé en anglais	Maximizing gains from wind energy potential is the principle objective of the wind power sector. Consequently, wind tower size is radically increasing. However, choosing an appropriate wind turbine for a selected site requires having an accurate estimation of vertical wind profile. This is also imperative from the cost and maintenance strategy point of view. Installing tall towers or other expensive devices such as LIDAR or SODAR raises the costs of a wind power project. In this work, we aim to investigate the ability of a Neural Network trained using the Bayesian Regularization technique to estimate wind speed profile up to a height of 100m based on knowledge of wind speed at lower heights. Results show that the proposed approach can achieve satisfactory predictions and prove the suitability of the proposed method for generating wind speed profile and probability distributions based on knowledge of wind speed at lower heights.
URL de la notice	http://okina.univ-angers.fr/publications/ua16838 [9]
Lien vers le document	http://inpressco.com/a-bayesian-regularized-artificial-neural-network-fo... [10]

Liens

[1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17363>

[2] <http://okina.univ-angers.fr/abderafi.charki/publications>

[3] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=3927>

[4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17365>

[5] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=24353>

[6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=24352>

[7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=24350>

[8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=24351>

[9] <http://okina.univ-angers.fr/publications/ua16838>

[10]

<http://inpressco.com/a-bayesian-regularized-artificial-neural-network-for-up-scaling-wind-speed-profile/>

Publié sur *Okina* (<http://okina.univ-angers.fr>)