



On the value of graph-based segmentation for the analysis of structural networks in life sciences

Submitted by Pejman RASTI on Fri, 09/07/2018 - 11:52

Titre	On the value of graph-based segmentation for the analysis of structural networks in life sciences
Type de publication	Communication
Type	Communication avec actes dans un congrès
Année	2017
Langue	Anglais
Date du colloque	28-08/02-09/2017
Titre du colloque	2017 25th European Signal Processing Conference (EUSIPCO)
Titre des actes ou de la revue	2017 25th European Signal Processing Conference (EUSIPCO)
Pagination	2664-2668
Auteur	Bujoreanu, Denis [1], Rasti, Pejman [2], Rousseau, David [3]
Pays	Grèce
Editeur	IEEE
Ville	Kos
ISBN	978-0-9928626-8-8
Mots-clés	Image segmentation [4], Imaging [5], Measurement [6], Muscles [7], skeleton [8], Three-dimensional displays [9], Topology [10]
Résumé en anglais	We propose, under the form of a short overview, to stress the interest of graph to encode the "topological" structure of networks hidden in images especially when applied in life sciences. We point toward existing computer science tools to extract such structural graph from images. We then illustrate different applications, such as segmentation, denoising, and simulation on practical examples of various bioimaging domains including vascular networks observed with fluorescent microscopy in 2D imaging, macroscopic root systems observed in 2D optical intensity imaging, and 3D porosity networks of seed observed in absorption X-ray microtomography.
URL de la notice	http://okina.univ-angers.fr/publications/ua17496 [11]
DOI	10.23919/EUSIPCO.2017.8081694 [12]
Lien vers le document en ligne	https://ieeexplore.ieee.org/document/8081694/ [13]

Liens

[1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=24252>

[2] <http://okina.univ-angers.fr/httpperso-laris.univ-angers.fr/rasti/publications>

[3] <http://okina.univ-angers.fr/david-rousseau/publications>

[4] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=6749>

- [5] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=3663>
- [6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=21499>
- [7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=25264>
- [8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=24013>
- [9] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=25265>
- [10] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=452>
- [11] <http://okina.univ-angers.fr/publications/ua17496>
- [12] <http://dx.doi.org/10.23919/EUSIPCO.2017.8081694>
- [13] <https://ieeexplore.ieee.org/document/8081694/>

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