



## When Spiderman moves around the city: parametric brushes

José Ballesteros

Universidad Politécnica de Madrid  
ETS Arquitectura Dpto Proyectos Arquitectónicos  
Avenida Juan de Herrera 4, 28040 Madrid  
Spain

joseballesteros.arq@gmail.com

### ABSTRACT

On many occasions we walk or circulate around the city involuntarily fixing our attention on certain elements and not others. This suggests that the street is not homogeneous, and that its surfaces, its components, its textures, its light make up a complex system of factors that form a wonderful scenario. Some of them structurally could be supports or articulations, mathematically exceptions or singular points or intervals in surfaces, architecturally I would say extraordinary opportunities.

Spiderman knows it and that is why he does not cast his threads chaotically. He uses his singular points to fix a trajectory by balancing, a pendular algorithm that leads him in his particular walk. It would be better to ask ourselves then ... What happens if we change the algorithm? What happens if instead of being points to hang on they were points to support themselves? What happens if they are geometry generating points? Spiderman throws away his threads once he has used them, but ... and if we think they are useful? and if his trail, or one of the traces of our modified algorithm, build space and complex geometries?



Universidad Politécnica de Madrid  
E.T.S. de Arquitectura,  
Departamento de Matemática Aplicada

International Conference Challenges in Mathematical Architecture.  
Theory, Modelling and Applications  
<http://ccma2019.aq.upm.es>

CCMA2019 is a satellite conference of ICIAM 2019 - Valencia