

Universitat DE BARCELONA



UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

Barcelona Analysis Seminar	2021–2022
URL. https://mat.uab.cat/web/seminarianalisi/	
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Room. CRM A1 (Universitat Autònoma de Barcelona)	
Online streaming (Zoom). Click here to join.	

Boundary effects on the emergence of quasi-periodic solutions for Euler equations

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We highlight the importance of the boundary effects on the construction of quasiperiodic vortex patch solutions close to Rankine vortices (patches associated with discs) for the Euler model. Their existence is not known in the whole space due to the resonances of the linear frequencies. Availing of the lack of invariance by radial dilation of Euler equations in the unit disc and using a Nash-Moser implicit function iterative scheme we show the existence of such structures when the radius of the Rankine vortex belongs to a suitable massive Cantor-like set with almost full Lebesgue measure.