This article was downloaded by: [Universidad Autonoma de Barcelona], [Jaume Llibre]
On: 12 November 2012, At: 04:23
Publisher: Taylor \& Francis
Informa Ltd Registered in England and Wales Registered Number: 1072954
Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK


## Mathematical Modelling and Analysis <br> Publication details, including instructions for authors and subscription information: <br> http:// www.tandfonline.com/loi/tmma20

# Periodic Orbits Near Equilibria via Averaging Theory of Second Order 

Luis Barreira ${ }^{\text {a }}$, J aume Llibre ${ }^{b}$ \& Claudia Valls ${ }^{\text {a }}$<br>${ }^{\text {a }}$ Instituto Superior Técnico, Av. Rovisco Pais, 1049-001, Lisboa, Portugal<br>${ }^{\text {b }}$ Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Catalonia, Spain

To cite this article: Luis Barreira, J aume Llibre \& Claudia Valls (2012): Periodic Orbits Near Equilibria via Averaging Theory of Second Order, Mathematical Modelling and Analysis, 17:5, 715-731

To link to this article: http:// dx.doi.org/ 10.3846/ 13926292.2012.736090

## PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.tandfonline.com/page/terms-andconditions

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sublicensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

