

curriculum vitae

formato europeo/european format

**INFORMAZIONI PERSONALI/
PERSONAL INFORMATION**

Nome, Cognome/Name, Surname	Roberto Natalini
Indirizzo/Address Via, numero civico, c.a.p., città, nazione/ House number, street name, postcode, city, country	Via dei taurini 19- 00185 – Roma (RM), Italy
Telefono/Telephone	+39-0649270961
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E-mail	roberto.natalini@cnr.it
Sito web/Website	http://www.iac.rm.cnr.it/~natalini/
Nazionalità/Nationality	Italian
Luogo e data di nascita/ Place and Date of birth	Roma, 4 July 1960

**ESPERIENZA PROFESSIONALE
/WORK EXPERIENCE**

(from - to)	15/03/1999 - present
Nome e indirizzo del datore di lavoro / Name and address of employer	Istituto per le applicazioni del calcolo "Mauro Picone", Consiglio Nazionale delle Ricerche
Funzione o posto occupato / Occupation or position held	Dirigente di ricerca
(from - to)	01/11/1998 -15/03/1999
Nome e indirizzo del datore di lavoro / Name and address of employer	Università degli Studi di ROMA "La Sapienza" - P.zza Aldo Moro, 5 - ROMA
Funzione o posto occupato / Occupation or position held	Professore Associato

(from - to) 01/11/1998 - 15/03/1999

Nome e indirizzo del
datore di lavoro / Name
and address of employer

Istituto per le applicazioni del calcolo "Mauro Picone", Consiglio
Nazionale delle Ricerche

Funzione o posto
occupato / Occupation or
position held

Ricercatore

**ISTRUZIONE E
FORMAZIONE / EDUCATION
AND TRAINING**

22/06/1986

Dottore di ricerca

Dottorato di Ricerca in Matematica

Tres bien

Multiplication de distributions et polarisations des singularités

Université de Bordeaux I - 351, cours de la Libération - F 33405

TALENCE, France

Università straniera

20/07/1983

Laurea (vecchio ordin.)

laurea in Matematica

110/110 e lode

Teoremi di immersione Holderiana e di traccia per spazi i Sobolev
anisotropi

Università degli Studi di ROMA "La Sapienza" - P.zza Aldo Moro, 5 -
ROMA

**ATTIVITA' DI RICERCA /
RESEARCH ACTIVITIES**

Attuali campi di ricerca /
Research sectors

Partial Differential Equations, Numerical Analysis, Modeling.

Recenti attività
scientifiche/ Recent
Scientific Activities.

From 2002 to 2005 he was the Head of the research unit "Complex Systems"
at IAC-CNR. He published more than 90 papers on international journals,
working on nonlinear hyperbolic and parabolic partial differential equations.
His research themes include: relaxation and fluid dynamical limits, numerical
approximation of shock and diffusive waves, asymptotic numerical methods,
filtration problems in porous media, mechanical and chemical damage in
natural stones in historical monuments, traffic flows on networks, financial
mathematics, mathematical models in biomathematics.

1. R. Natalini, M. Ribot. Asymptotic High Order Mass-Preserving Schemes for a Hyperbolic Model of Chemotaxis, *SIAM Journal on Numerical Analysis* 50 (2012), pp. 883-905. DOI: 10.1137/100803067.
2. A. Amadori, B. Boccabella, R. Natalini. A hyperbolic model of spatial evolutionary game theory. *Comm. Pure Appl. Analysis* 11, (2012), 981 – 1002. doi: [10.3934/cpaa.2012.11.981](https://doi.org/10.3934/cpaa.2012.11.981)
3. Boccabella, Astridh ; Natalini, Roberto ; Pareschi, Lorenzo . On a continuous mixed strategies model for evolutionary game theory. *Kinet. Relat. Models* 4 (2011), no. 1, 187--213.
4. A. Cangiani, R. Natalini, A spatial model of cellular molecular trafficking including active transport along microtubules. *JOURNAL OF THEORETICAL BIOLOGY*, vol. 267; p. 614-625, ISSN: 0022-5193, doi: 10.1016/j.jtbi.2010.08.017
5. Clarelli, Fabrizio ; Natalini, Roberto . A pressure model of immune response to mycobacterium tuberculosis infection in several space dimensions. *Math. Biosci. Eng.* 7 (2010), no. 2, 277—300.
6. Mascia, Corrado ; Natalini, Roberto . On relaxation hyperbolic systems violating the Shizuta-Kawashima condition. *Arch. Ration. Mech. Anal.* 195 (2010), no. 3, 729—762.
7. Guarguaglini, Francesca Romana ; Mascia, Corrado ; Natalini, Roberto ; Ribot, Magali . Stability of constant states of qualitative behavior of solutions to a one dimensional hyperbolic model of chemotaxis. *Discrete Contin. Dyn. Syst. Ser. B* 12 (2009), no. 1, 39 —76.
8. Davide Vergni, Filippo Castiglione, Maya Briani, Silvia Middei, Elena Alberdi, Klaus G. Reymann, Roberto Natalini, Cinzia Volonté, Carlos Matute, Fabio Cavaliere, A Model of Ischemia-Induced Neuroblast Activation in the Adult Subventricular Zone, *PLoS ONE*, 23 Feb. 2009, <http://dx.plos.org/10.1371/journal.pone.0005278>.
9. Carbou, G. ; Hanouzet, B. ; Natalini, R. Semilinear behavior for totally linearly degenerate hyperbolic systems with relaxation. *J. Differential Equations* 246 (2009), no. 1, 291—319.
10. Clarelli, Fabrizio ; Fasano, Antonio ; Natalini, Roberto . Mathematics and monument conservation: free boundary models of marble sulfation. *SIAM J. Appl. Math.* 69 (2008), no. 1, 149—168.
11. Aregba-Driollet, Denise ; Bretti, Gabriella ; Natalini, Roberto . Numerical schemes for the Barenblatt model of non-equilibrium two-phase flow in porous media. *Quart. Appl. Math.* 66 (2008), no. 2, 201—231.
12. Aregba-Driollet, Denise ; Briani, Maya ; Natalini, Roberto . Asymptotic high-order schemes for 2×2 dissipative hyperbolic systems. *SIAM J. Numer. Anal.* 46 (2008), no. 2, 869—894.
13. Carfora, Maria Francesca ; Natalini, Roberto . A discrete kinetic approximation for the incompressible Navier-Stokes equations. *M2AN Math. Model. Numer. Anal.* 42 (2008), no. 1, 93—112.
14. Bretti, G. ; Natalini, R. ; Piccoli, B. Numerical algorithms for simulations of a traffic model on road networks. *J. Comput. Appl. Math.* 210 (2007), no. 1-2, 71—77.
15. Bianchini, Stefano ; Hanouzet, Bernard ; Natalini, Roberto . Asymptotic behavior of smooth solutions for partially dissipative hyperbolic systems with a convex entropy. *Comm. Pure Appl. Math.* 60 (2007), no. 11, 1559—1622.
16. Bretti, Gabriella ; Natalini, Roberto ; Piccoli, Benedetto . A fluid-dynamic traffic model on road networks. *Arch. Comput. Methods Eng.* 14 (2007), no. 2, 139—172. *European J. Appl. Math.* 14 (2003), no. 4, 447--464.

17. Alì, Giuseppe ; Furuholt, Vidar ; Natalini, Roberto ; Torcicollo, Isabella . A mathematical model of sulphite chemical aggression of limestones with high permeability. I. Modeling and qualitative analysis.
Transp. Porous Media 69 (2007), no. 1, 109—122.
18. Alì, Giuseppe ; Furuholt, Vidar ; Natalini, Roberto ; Torcicollo, Isabella . A mathematical model of sulphite chemical aggression of limestones with high permeability. II. Numerical approximation.
Transp. Porous Media 69 (2007), no. 2, 175—188.
19. Guarguaglini, F. R. ; Natalini, R. Fast reaction limit and large time behavior of solutions to a nonlinear model of sulphation phenomena.
Comm. Partial Differential Equations 32 (2007), no. 1-3, 163—189.
20. Guarguaglini, F. R. ; Natalini, R. Nonlinear transmission problems for quasilinear diffusion systems. Netw. Heterog. Media 2 (2007), no. 2, 359—381.
21. Briani, Maya ; Natalini, Roberto ; Russo, Giovanni . Implicit-explicit numerical schemes for jump-diffusion processes. Calcolo 44 (2007), no. 1, 33—57.
22. Garavello, Mauro ; Natalini, Roberto ; Piccoli, Benedetto ; Terracina, Andrea . Conservation laws with discontinuous flux. Netw. Heterog. Media 2 (2007), no. 1, 159—179.
23. Guarguaglini, F. R. ; Natalini, R. Global existence and uniqueness of solutions for multidimensional weakly parabolic systems arising in chemistry and biology. Commun. Pure Appl. Anal. 6 (2007), no. 1, 287—309.