

# CURRICULUM VITAE

**CLAUDIA TIMOFTE**

**Professor of Mathematics**

## CONTACT INFORMATION

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## PROFESSIONAL AND ACADEMIC EXPERIENCE

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02/08 - present: Professor, Department of Theoretical Physics, Mathematics, Optics,  
Plasma and Lasers, Faculty of Physics, University of Bucharest, Romania.  
10/05 - 09/17: Senior Researcher, Research Center "Theoretical Physics", Faculty of  
Physics, University of Bucharest, Romania.  
10/03 - 02/08: Associate Professor, Department of Theoretical Physics, Mathematics,  
Optics, Plasma and Lasers, Faculty of Physics, University of Bucharest,  
Romania.  
10/98 - 09/03: Lecturer, Department of Theoretical Physics, Mathematics, Optics,  
Plasma and Lasers, Faculty of Physics, University of Bucharest,  
Romania.  
10/91 - 09/98: Assistant, Department of Theoretical Physics, Mathematics, Optics,  
Plasma and Lasers, Faculty of Physics, University of Bucharest, Romania.  
08/90 - 09/91 Mathematician, Center for Demographic Studies, Bucharest, Romania.  
11/88 - 07/90 Mathematician, Hydraulic Pumps Plant, Botosani, Romania.  
09/88 - 10/88 Teacher, School No. 1, Turda, Cluj, Romania.

## EDUCATION AND ACADEMIC DEGREES

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05/17: Habilitation in Mathematics, University of Bucharest, Romania.  
10/02 - 03/03: Post-doctoral fellowship, Center of Mathematical Modelling, University of  
Chile, Santiago de Chile, Chile.  
01/02 - 06/02: Post-doctoral fellowship, Center of Mathematical Modelling, University  
of Chile, Santiago de Chile, Chile.  
05/01 - 07/01: Post-doctoral fellowship, University of Pisa, Italy.  
11/00 - 04/01: Post-doctoral fellowship, University Complutense, Madrid, Spain.

03/ 92 - 10/96: Ph.D. in Mathematics at "Simion Stoilow" Institute of Mathematics of the Romanian Academy, Bucharest, Romania.

10/ 83 - 07/88: Master of Science, Bucharest University, Faculty of Mathematics, Bucharest, Romania.

09/79 - 07/83: National College A. I. Cuza, Alexandria, Teleorman, Romania.

## **PROFESSIONAL AFFILIATIONS**

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- American Mathematical Society (AMS)
- Society for Industrial and Applied Mathematics (SIAM)
- Society for Mathematical Sciences in Romania

## **INVITATIONS AT FOREIGN UNIVERSITIES**

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- University of Sannio, Benevento, Italy (2018)
- Sapienza University, Rome, Italy (2017, 2019)
- University of Cantabria, Santander, Spain (2016)
- University of Lorraine, Metz, France (2015, 2016, 2017, 2018, 2019, 2020)
- Complutense University, Madrid, Spain (2005, 2014, 2015)
- Humboldt University, Berlin, Germany (2010)
- RWTH Aachen, Germany (2007, 2008, 2009)
- Taras Sevchenko University, Kiev, Ukraine (2008)
- University of Pavia, Italy (2008)
- Technical University of Eindhoven, Holland (2005)

## **LANGUAGES**

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- Romanian (native)
- English (fluent)
- French (good)
- Spanish (very good)

## **TEACHING**

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- Special Chapters of Mathematical Methods for Physics and Engineering
- Complements of Mathematics
- Mathematical Analysis
- Complex Analysis
- Differential Equations
- Homogenization Theory

## **RESEARCH INTERESTS**

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- Homogenization theory
- Macrotransport processes
- Probabilistic methods in fluid dynamics
- Relaxation methods for optimization problems

- Upscaling in chemical reactive processes in porous media
- Mathematical models in biology and in crystallography

## **RESEARCH GRANTS**

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- Grant 3046GR/1997, "Macrotransport processes. Applications to material dispersion problems", Romanian Academy, 1997, project director.
- Grant 4064GR/1998, "Macrotransport processes. Applications to material and non-material dispersion problems", Romanian Academy, 1998, project director.
- CNCSIS 2001-2003, Contract Nr. 35262/2001, "Applications of group theory to quasicrystals physics" – member.
- "Homogenization and Multiple Scales 2000", financed by the European Union, contract HPRN-2000-00109 – member.
- CNCSIS 2004-2006, "Representation of symmetry groups of carbon nanotubes with applications to the study of physical properties of such materials" - member.
- CERES nr. 129/2004 "Mathematical formalisms for the description of quasiperiodic crystals and atomic clusters", 2004-2006 – member.
- CERES nr. 192/2004, 2004 - 2006 – member.
- CEx05-D10-02, 2005-2007 – member.
- CEx05-D11-03, 2005-2007 – member.
- CNCSIS 1059/2006, "Mathematical models for the asymptotic study of nonhomogeneous media", 2006 -2007, director of the project.
- PN II - IDEAS, CNCSIS 992, contract 31/28.09.2007, "Homogenization methods for the study of some nonlinear phenomena in complex media", 2007 - 2010, director of the project.
- Bilateral project LEA Math Mode, 2015, "Homogenization of a Thermal Problem with Flux Jump" (with dr. Renata Bunoiu, Metz, France).
- Bilateral project GDRI ECO-Math, 2018, "Homogenization of a Class of Diffusion Problems with Flux Jump" (with dr. Renata Bunoiu, Metz, France).

## **LIST OF PUBLICATIONS**

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### **PUBLISHED BOOKS OR CHAPTERS IN BOOKS**

- C. Timofte, "Special Topics în Mathematics" (in English), Editura Universitatii din Bucuresti, 2016, ISBN 978-606-16-0739-6.
- C. Timofte, "Complex Analysis" (in English), Editura Universitatii din Bucuresti, 2014, ISBN 978-606-16-0459-3.
- C. Timofte, "Asymptotic Methods for the Study of Nonhomogeneous Media", Shaker Verlag GmbH, 2007, ISBN 978-3-8322-6092-7.
- C. Timofte, "Differential Calculus" (in English), Editura Universitatii din Bucuresti, 2009, ISBN 978-973-737-611-4.
- C. Timofte, "Ordinary Differential Equations" (in English), Editura Universitatii din Bucuresti, 2006, ISBN 973-737-123-2.
- C. Conca, J. I. Diaz, A. Linan, C. Timofte, "On the Homogenization of a Semilinear Problem Arising in Chemistry", chapter in "Multi Scale Problems and Asymptotic Analysis", GAKUTO International Series Mathematical Sciences and Applications, Volume 24, pp. 89-103, Gakkotosho, Tokyo, Japan, 2006, ISBN 4-7625-0433-5.

- C. Conca, J.I. Díaz, A. Linan, C. Timofte, "Homogenization in chemical reactive flows through porous media", chapter in "New trends in continuum mechanics", Theta Foundation, 2005.
- C. Timofte, C. Conca, "Interactive sources of oscillations in Signorini's type problems", *Partial Differential Equations and Inverse Problems*, chapter in "Contemporary Mathematics 362", American Mathematical Society Book Series, Providence, Rhode Island (2004), ISBN 0-8218-3448-7.
- C. Timofte, "Asymptotic Methods for Nonhomogeneous Media", monograph (in Romanian), Editura Didactica si Pedagogica, Bucuresti, 2003, ISBN 973-30- 2080-X.
- C. Timofte, "Macrotransport Processes", monograph (in Romanian), Editura Universitatii din Bucuresti, 1997, ISBN 973-575-195-x.
- M. Piticu, M. Vraciu, C. Timofte, G. Pop, "Differential Equations. Problems" (in Romanian), Editura Universitatii din Bucuresti, 1995.

### **PAPERS IN REFEREED JOURNALS (SELECTION)**

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- M. Amar, D. Andreucci, C. Timofte, "Homogenization of a modified bidomain model involving imperfect transmission", *Communications on Pure & Applied Analysis*, 20 (5), 1755-1782, 2021.
- R. Bunoiu, K. Ramdani, C. Timofte, "T-coercivity for the asymptotic analysis of scalar problems with sign-changing coefficients in thin periodic domains", *Electronic J. Differential Equations*, 2021 (59), 1-22, 2021.
- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "Well-posedness of two pseudo-parabolic problems for electrical conduction in heterogeneous media", *Journal of Mathematical Analysis and Applications*, 493 (2), 2021.
- R. Bunoiu, C. Timofte, "Upscaling of a double porosity problem with jumps in thin porous media", *Applicable Analysis*, 2020. DOI:10.1080/00036811.2020.1854232.
- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "Concentration and homogenization in electrical conduction in heterogeneous media involving the Laplace–Beltrami operator", *Calc. Var.* **59**, 99, 2020. <https://doi.org/10.1007/s00526-020-01749-x>
- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "Homogenization results for a class of parabolic equations with a non-local interface condition via time-periodic unfolding", *NoDEA Nonlinear Differential Equations Appl.*, 12, 26-52, 2019.
- G. Cardone, C. Perugia, C. Timofte, "Homogenization results for a coupled system of reaction-diffusion equations", *Nonlinear Analysis*, 188, 236-264, 2019.
- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "A degenerate pseudo-parabolic equation with memory", *Comm. Appl. Ind. Math.*, 10 (1), 71-77, 2019.
- R. Bunoiu, C. Timofte, "Upscaling of a parabolic system with a large nonlinear surface reaction term", *Journal of Mathematical Analysis and Applications*, 469 (2), 549-567, 2019.
- R. Bunoiu, C. Timofte, "Upscaling of a diffusion problem with interfacial flux jump leading to a modified Barenblatt model", *ZAMM - Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 2019; <https://doi.org/10.1002/zamm.201800018>.
- R. Bunoiu, C. Timofte, "Diffusion problems in composite media with interfacial flux jump", *Romanian Reports in Physics*, 70, 116, 2018.
- R. Bunoiu, C. Timofte, "On the homogenization of a two-conductivity problem with flux jump", *Communications in Mathematical Sciences*, 15 (3), pp. 745-763, 2017.

- C. Timofte, “Homogenization results for the calcium dynamics in living cells”, *Mathematics and Computers in Simulation*, 133 (3), pp. 165-174, 2017.
- C. Timofte, “Homogenization results for a carcinogenesis model”, *Mathematics and Computers in Simulation*, 133 (3), 298-310, 2017.
- A. Capatina, C. Timofte, “Homogenization results for micro-contact elasticity problems”, *Journal of Mathematical Analysis and Applications*, 441, pp. 462-474, 2016.
- R. Bunoiu, C. Timofte, “Homogenization of a thermal problem with flux jump”, *Networks and Heterogeneous Media*, 11 (4), pp. 545-562, 2016.
- J. I. Diaz, D. Gomez-Castro, C. Timofte, The effectiveness factor of reaction-diffusion equations: homogenization and existence of optimal pellet shapes, *JEPE*, 2, pp. 119-129, 2016.
- H.I. Ene, C. Timofte, “Homogenization results for a dynamic coupled thermoelasticity problem”, *Romanian Reports in Physics*, 68 (3), pp. 979-989, 2016.
- H.I. Ene, C. Timofte, I. Țențea, “Homogenization of a thermoelasticity model for a composite with imperfect interface”, *Bull. Math. Soc. Sci. Math. Roumanie*, Tome 58 (2), 147-160, 2015.
- H.I. Ene, C. Timofte, “Microstructure models for composites with imperfect interface via the periodic unfolding method”, *Asymptotic Analysis*, 89 (1-2), pp. 111-122, 2014.
- A. Capatina, C. Timofte, ”Boundary optimal control for quasistatic bilateral frictional contact problems”, *Nonlinear Analysis: Theory, Methods and Applications*, 94, pp. 84–99, 2014.
- C. Timofte, “Homogenization results for ionic transport in periodic porous media”, *Computers and Mathematics with Applications*, 68 (9), pp. 1024–1031, 2014.
- C. Timofte, “Multiscale analysis of diffusion processes in composite media”, *Computers and Mathematics with Applications*, 66 (9), pp. 1573-1580, 2013.
- C. Timofte, “Multiscale modeling of heat transfer in composite materials”, *Rom. Journ. Phys.*, 58 (9-10), pp 1418–1427, 2013.
- A. Capatina, C. Timofte, “An optimal control problem governed by implicit evolution quasi-variational inequalities”, *Annals of the University of Bucharest*, 4 (LXII), pp. 157-166, 2013.
- A. Capatina, H. Ene, C. Timofte, “Homogenization results for elliptic problems in periodically perforated domains with mixed-type boundary conditions”, *Asymptotic Analysis*, 80 (1-2), pp. 45-56, 2012.
- C. Timofte, N. Cotfas, G. Pavel, „On the asymptotic behaviour of some elliptic problems in perforated domains”, *Romanian Reports in Physics*, 64 (1), pp. 5–14, 2012.
- N. Cotfas, C. Timofte, G. Pavel, ”Finite Frames and Finite Frame Quantizations”, *Romanian Reports in Physics*, 63 (4), pp. 1026–1037, 2011.
- C. Timofte, „Multiscale analysis of composite structures”, *Biomath*, 1, pp. 1-5, 2012.
- C. Timofte, ”Homogenization results for nonlinear thermal diffusion problems in composite structures”, *Central European Journal of Physics*, 8 (4), pp. 555-561, 2010.
- C. Timofte, ”Homogenization Results for Hyperbolic-Parabolic Equations”, *Romanian Reports in Physics* 62 (2), pp. 229-238, 2010.
- C. Timofte, ”Homogenization Results for a Nonlinear Wave Equation in a Perforated Domain”, *U.P.B. Sci. Bull., Series A* 72 (2), 2010.
- C. Timofte, ”Multiscale analysis in dynamical heat transfer problems in biological tissues”, *Romanian Reports in Physics*, 61 (2), pp. 269-280, 2009.
- B. Calmuschi-Cula, I. Kalf, C. Timofte, U. Englert, ”Robust packing in cyclopalladated primary amines: isomorphous crystal structures of four complexes with varying substitution patterns”, *Acta Cryst. C* 65, m48 - m51, 2009.

- C. Timofte, "Homogenization results for enzyme catalyzed reactions through porous media", *Acta Mathematica Scientia* 29B (1), pp. 74-82, 2009.
- C. Timofte, "Upscaling in dynamical heat transfer problems in biological tissues", *Acta Physica Polonica B* 39 (11), pp. 2811-2822, 2008.
- C. Timofte, "Homogenization results for climatization problems", *Annali dell'Universita di Ferrara Sez. VII (N.S.)*, 53 (2), pp. 437-448, 2007.
- C. Timofte, "Upscaling in Diffusion Problems in Domains with Semipermeable Boundaries", *Acta Physica Polonica B* 38 (8), pp. 2433-2443, 2007.
- C. Timofte, "Upscaling of variational inequalities arising in nonlinear problems with unilateral constraints", *Z. Angew. Math. Mech.* 87 (6), pp. 406-412, 2007.
- C. Timofte, "On the Homogenization of a Climatization Problem", *Studia Universitatis Babes-Bolyai Mathematica*, 2, pp. 117-126, 2007.
- C. Timofte, "On the Michaelis-Menten enzyme mechanism", *Romanian Reports in Physics*, 57, 3, pp. 296-305, 2005.
- C. Conca, J. I. Diaz, A. Linan, C. Timofte, "Homogenization in chemical reactive flows through porous media", *Electron. J. Diff. Eqns.*, Vol. 2004, No. 40, pp. 1-22.
- C. Timofte, "On the Homogenization of Parabolic Problems with Dynamical Boundary Conditions in Perforated Media", *Romanian Reports in Physics*, 56, 2, pp. 131-140, 2004.
- C. Conca, J.I. Diaz, C. Timofte, "On the homogenization of a transmission problem arising in chemistry", *Romanian Reports in Physics*, 56, 4, pp. 613-622, 2004.
- C. Timofte, "On the asymptotic behavior of thermal Taylor dispersion processes in periodic media", *Journal of Theoretical and Applied Mechanics*, 41, pp. 75-88, 2003.
- C. Conca, F. Murat, C. Timofte, "A Generalized Strange Term in Signorini's Type Problems", *ESAIM: Model. Math. Anal. Numer. (M2AN)* 37(5), pp. 773-806, 2003.
- C. Conca, J. I. Diaz, C. Timofte, "Effective Chemical Processes in Porous Media", *Math. Models Methods Appl. Sci. (M3AS)*, 13 (10), pp. 1437-1462, 2003.
- C. Timofte, "Parabolic Problems with Dynamical Boundary Conditions in Perforated Media", *Mathematical Modelling and Analysis*, 8 (4), pp. 337-350, 2003.
- G. Buttazzo, C. Timofte, "On the relaxation of some optimal partition problems", *Advances in Mathematical Sciences and Applications*, 12, 2, pp. 509-520, 2002.
- C. Timofte, "A macrotransport paradigm for thermal Taylor dispersion processes in periodic media", *Romanian Reports in Physics*, 52 (5-6-7), pp. 441-446, 2000.
- C. Timofte, "Asymptotics of thermal dispersion in periodic media", *Journal of Theoretical and Applied Mechanics*, 37 (1), pp. 95-108, 1999.
- C. Timofte, "On the asymptotic behavior of some Taylor dispersion processes in periodic media", *Romanian Reports in Physics*, 50 (7-8-9), pp. 681-690, 1998.

## **PREPRINTS**

- M. Amar, D. Andreucci, C. Timofte, "Well-posedness for a modified bidomain model describing bioelectric activity in damaged heart tissues", 2020, arXiv:2101.09285.

## **PAPERS IN PROCEEDINGS OF INTERNATIONAL CONFERENCES (SELECTION)**

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- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "Homogenization of a heat conduction problem with a total flux boundary condition", *Proceedings of the XXIV AIMETA Conference - Lecture Notes in Mechanical Engineering*, Springer, 2020.

- C. Timofte, “Multiscale analysis of heat transfer problems in composite media”, Proceedings of International Symposium on Stability, Vibrations and Control of Systems, Budapest, Hungary, 2016.
- R. Bunoiu, C. Timofte, “On the homogenization of a diffusion problem with flux jump”, Biomath Communications, 3 (1), 2016.
- J.I. Díaz, D. Gómez-Castro, C. Timofte, „On the influence of pellet shape on the effectiveness factor of homogenized chemical reactions”, Proceedings of the XXIV Congress on Differential Equations and Applications-XIV Congress on Applied Mathematics, Cádiz, Spain, pp. 1–6, 2015.
- C. Timofte, ”On the Homogenization of a Damped Wave Equation”, AIP Conference Proceedings, 1301, 2010.
- C. Timofte, ”Homogenization Results for a Coupled System of Diffusion Equations in a Porous Medium”, AIP Conference Proceedings, 1281, pp. 635-638, 2010.
- C. Timofte, ”Homogenization Results for a Wave Equation with Interior and Boundary Damping”, ICNPAA, Cambridge Scientific Publishers, 2010.
- C. Timofte, ”Asymptotic Analysis in Dynamical Heat Transfer Problems in Heterogeneous Periodic Media”, AIP Conference Proceedings, 1186, pp. 248-258, 2009.
- C. Timofte, ”Homogenization results for diffusion problems in composite structures”, Proceedings of International Conference MCM-2008, Riga, Latvia, 2008.
- C. Timofte, ”Upscaling in Reaction-Diffusion Problems”, AIP Conference Proceedings, 936, pp. 547-550, Melville, New York, 2007.
- C. Timofte, ”Upscaling in Nonlinear Thermal Diffusion Problems in Composite Materials”, Progress in Industrial Mathematics at ECMI 2006, Springer Series, 12, pp. 328-332, 2007.
- C. Timofte, ”Homogenization in Nonlinear Chemical Reactive Flows”, Proceedings of the International Conference MATH’06, Istanbul, Turkey, pp. 250-255, 2006.
- C. Timofte, ”On the homogenization of a nonlinear problem arising in elasticity”, Proceedings of the International Conference NOLASC’06, Bucharest, pp. 15-20, 2006.
- C. Timofte, ”Homogenization Results for Enzymatic Dispersion Processes”, GAMM Annual Meeting, Berlin, Germany, 2006.
- C. Conca, J. I. Diaz, A. Linan, C. Timofte, ”Effective Chemical Reactive Flows Through Porous Media”, Midnight Sun Conference, Narvik, Norway, 2004.
- C. Timofte, ”On the effective behavior of some chemical reactive flows through porous media”, French-Romanian Colloquium on Applied Mathematics, Craiova, Romania, 2004.
- C. Timofte, C. Conca, ”Interactive sources of oscillations in Signorini’s type problems”, Proceedings of Pan-American Advanced Studies Institute on Partial Differential Equations, Inverse Problems and Non-Linear Analysis, 2003, Santiago de Chile, Chile.
- C. Timofte, ”Application of central limit theorems to thermal dispersion in periodic media”, Proceedings of the First HMS 2000 International School and Conference on Homogenization, Naples, June 2001, Italy, Gakuto International Series in Mathematics, L. Carbone, R. De Arcangelis eds., pp. 281-289, 2003.
- C. Timofte, ”On the asymptotic behavior of thermal Taylor dispersion processes in periodic media”, Proceedings of the International Conference on Homogenization and Applications to Material Sciences, West University of Timisoara, pp. 101-110, 2001.
- C. Timofte, ”Application of central limit theorems to macrotransport processes”, Proceedings of the International Conference on Analysis and Numerical Computation of Solutions of Nonlinear Systems Modelling Physical Phenomena, West University of Timisoara, pp. 416-425, 1997.

## **INVITED LECTURES AT INTERNATIONAL CONFERENCES**

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- “Microstructure Models for Composites with Imperfect Interfaces”, International Conference on Applied Mathematics and Numerical Methods (ICAMNM), Craiova, Romania, 2016.
- “Multiscale Analysis of Nanocomposite Materials”, Workshop “NanoMath 2014”, Zaragoza, Spain, 2014.
- ”Multiscale analysis of composite structures with applications to biology”, BIOMATH 2012, Sofia, Bulgaria, 2012.
- “On the asymptotic behavior of a Signorini problem in a perforated domain”, The Seventh Congress of Romanian Mathematicians, Brasov, 2011.
- ”On the Homogenization of a Damped Wave Equation”, Second Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Sozopol, Bulgaria, 2010.
- ”Homogenization in Nonlinear Chemical Reactive Flows”, MATH’06, Istanbul, Turkey, 2006.
- ”On the homogenization of a nonlinear problem arising in elasticity”, NOLASC’06, Bucharest, 2006.
- ”Effective Chemical Processes in Porous Media”, Invited lecture, University Complutense, Madrid, Spain, 2005.
- ”On the homogenization of some climatization problems”, Second International Conference on Applied Mathematics, Plovdiv, Bulgaria, 2005.
- ”Homogenization results for chemical reactive flows”, CASA Minisymposium, Technical University of Eindhoven, Holland, 2005.
- ”On the homogenization of Signorini’s type problems”, Twelfth International Colloquium on Numerical Analysis and Computer Sciences with Applications, Plovdiv, Bulgaria, 2003.
- ”Homogenization of stratified periodic structures via Bloch decomposition”, Thirteenth International Colloquium on Differential Equations, Plovdiv, Bulgaria, 2002.
- ”On the homogenization of an evolutionary boundary-value problem”, Twelfth International Colloquium on Differential Equations, Plovdiv, Bulgaria, 2001.
- ”Homogenization methods for diffusion problems”, Eleventh International Colloquium on Differential Equations, Plovdiv, Bulgaria, 2000.
- ”A macrotransport paradigm for dispersion phenomena in periodic porous media”, International Colloquium on Differential Equations, Plovdiv, Bulgaria, 1999.

## **INVITED SEMINARS ABROAD**

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- “Upscaling in Diffusion Processes in Composite Media with Imperfect Interfaces”, University of Sannio, Benevento, Italy, 2018.
- “Diffusion Processes in Composite Media with Imperfect Interfaces”, University of Lorraine, Metz, France, 2017.
- “Homogenization Results for Composite Media with Imperfect Interfaces”, University of Cantabria, Santander, Spain, 2016.
- “Multiscale Analysis of Diffusion Processes in Composite Media”, University of Lorraine, Metz, France, 2016.
- “Effective Elastic and Thermoelastic Properties of Composites with Imperfect Interfaces”, University Complutense of Madrid, Spain, 2014.



- "Upscaling in Diffusion Problems with Semipermeable Boundaries", University of Pavia, Italy, 2008.
- "Homogenization results for chemical reactive flows", Taras Sevchenko University, Kiev, Ukraine, 2008.
- "Homogenization methods for thermal diffusion problems", RWTH Aachen, Germany, 2007.
- "Homogenization results for chemical reactive flows", Technical University of Eindhoven, Holland, 2005.
- "New results on Freundlich kinetics", Complutense University, Madrid, Spain, 2005.
- "On the homogenization of Signorini's type problems", CMM, University of Chile, Santiago de Chile, Chile, 2002.
- "Homogenization methods for diffusion problems", Complutense University, Madrid, Spain, 2001.
- "Nonhomogeneous dynamical boundary-value problems in perforated domains", University of Pisa, Italy, 2001.

### **COMMUNICATIONS AT INTERNATIONAL CONFERENCES (SELECTION)**

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- R. Bunoiu, C. Timofte, "Multiscale modeling of a class of thermal diffusion problems in composite media", SIMAI, Rome, Italy, July 2018.
- M. Amar, D. Andreucci, R. Gianni, C. Timofte, "Homogenization in heterogeneous media modeled by the Laplace-Beltrami operator", SIMAI, Rome, Italy, July 2018.
- R. Bunoiu, C. Timofte, "Upscaling of reaction-diffusion problems in composites with imperfect interfaces", Biomath, June 2018, Sofia, Bulgaria.
- C. Timofte, "Multiscale analysis of a carcinogenesis model", International Conference on Mathematical Methods and Models in Biosciences (Biomath 2015), June 2015, Blagoevgrad, Bulgaria.
- J.I. Díaz, D. Gómez-Castro, C. Timofte, "On the influence of pellet shape on the effectiveness factor of homogenized chemical reactions", XXIV Congress on Differential Equations and Applications, Cádiz, Spain, June 2015.
- C. Timofte, "Homogenization results for the calcium dynamics in living cells", BIOMATH 2014, International Conference on Mathematical Methods and Models in Biosciences, Sofia, Bulgaria, June 2014.
- H. Ene, C. Timofte, "Microstructure models for composites with imperfect interface via the periodic unfolding method", Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society, Alba Iulia, Romania, June 2013.
- C. Timofte, "Multiscale analysis of diffusion processes in composite media", BIOMATH 2013, Sofia, Bulgaria, June 2013.
- A. Capatina, C. Timofte, "Boundary optimal control for a quasistatic bilateral frictional contact problem", French-Romanian Colloquium of Applied Mathematics, Bucharest, 2012.
- C. Timofte, "Homogenization results for a coupled system of diffusion equations in a porous medium", ICNAAM 2010, Rhodos, Greece, 2010.
- A. Capatina, H. Ene, C. Timofte, "Homogenization results for elliptic problems in periodically perforated domains with mixed-type boundary conditions.", French-Romanian Colloquium, Poitiers, France, 2010.
- C. Timofte, "Homogenization Results for a Wave Equation with Interior and Boundary Damping", ICNPAA, Brazil, 2010.

- C Timofte, "Asymptotic analysis in dynamical heat transfer problems in heterogeneous periodic media", First Conference of the Euro-American Consortium for Promoting the Application of Mathematics in Technical and Natural Sciences, Sozopol, Bulgaria, 2009.
- C Timofte, "Homogenization results for dynamical heat transfer problems in biological tissues", French-Romanian Colloquium of Applied Mathematics, Brasov, 2008.
- C. Timofte, "Homogenization results for diffusion problems in composite structures", International Conference "Mechanics of Composite Materials", Riga, Latvia, 2008.
- C. Timofte, "Upscaling in Nonlinear Reaction-Diffusion Problems", International Congress of Romanian Mathematicians, Bucharest, July 2007.
- C. Timofte, "Homogenization of Diffusion Problems in Domains with Semipermeable Boundaries", Fifth Conference on Applied Mathematics and Scientific Computing, Brijuni, Croatia, July 2007.
- C. Timofte, "Upscaling in nonlinear thermal diffusion problems", ICIAM 2007 (GAMM), Zurich, July 16-20, 2007.
- C. Timofte, "Upscaling in reaction-diffusion problems", ICNAAM 2007, Corfu, Greece, September 2007.
- C. Timofte, "Homogenization results for enzymatic dispersion processes", GAMM Annual Meeting, Berlin, Germany, March, 2006.
- C. Timofte, "On the homogenization of some transmission problems in chemical reactive flows", French-Romanian Colloquium on Applied Mathematics, Chambéry, France, 2006.
- C. Timofte, "Homogenization Results for Nonlinear Thermal Diffusion Problems in Composite Materials", ECMI, Leganes-Madrid, Spain, 2006.
- C. Timofte, "On the homogenization of a nonlinear problem arising in elasticity", NOLASC'06, Bucharest, 2006
- C. Timofte, "Effective chemical processes in porous media", University Complutense, Madrid, Spain, 2005.
- C. Timofte, "On the Homogenization of some chemical reactive flows", SIAM GS05, Avignon, France, 2005.
- C. Timofte, "Homogenization results for boundary climatization problems", Conference on Applied Mathematics, Brijuni, Croatia, 2005.
- C. Timofte, "On the homogenization of some climatization problems", Second International Conference on Applied Mathematics, Plovdiv, Bulgaria, 2005.
- C. Timofte, "Homogenization in chemical flows", Midnight Sun Conference, Narvik, Norway, 2004.
- C. Timofte, "Homogenization results for climatization problems", Workshop "Homogenization and shape optimization", Lisbon, Portugal, 2004.
- C. Timofte, "On the effective behavior of some chemical reactive flows through porous media", French-Romanian Colloquium on Applied Mathematics, Craiova, 2004.
- C. Timofte, "On the homogenization of some semilinear problems arising in elasticity", ICNODEA, Cluj, Romania, 2004.
- C. Timofte, "A generalized strange term in Signorini's type problems", Pan-American Advanced Studies Institute on Partial Differential Equations, Inverse Problems and Nonlinear Analysis, 2003, Santiago de Chile, Chile.
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