<div align="center">

Nikos I. Karachalios
Curriculum Vitae

</div>

Date of Birth	10 July 1970 (in Vyronas, Athens, Greece).
Affiliation	Department of Mathematics, University of Thessaly, Lamia GR 35100, GREECE.
Address	
	Phone: +2231060196. Fax: + 2231033945. E-mail: karan@uth.gr, karachniki@gmail.com

Education

Degree ("Ptychion"- 4 years B.Sc.) in Mathematics, National and Kapodistrian University of Athens, Greece, 1994.

M. Sc. (with distinction) in the Mathematics of Nonlinear Models University of Edinburgh, Scotland, UK, 1995. (M.Sc. Dissertation Advisor: Dr. Sandro Merino).

Ph. D. in Partial Differential Equations, Division of Mathematics, National Technical University of Athens (ΕΜΠ), Greece, 1999. (Ph.D. Thesis Supervisor: Prof. Nikolaos M. Stavrakakis).

Employment

- Temporary lecturer, National Technical University of Athens, Division of Mathematics (February 2001-June 2001).
- Temporary lecturer, Department of Statistics and Actuarial Science University of the Aegean (September 2001-November 2003).
- Assistant Professor, Department of Mathematics, University of the Aegean (December 2003-February 2008).
- Associate Professor, Department of Mathematics, University of the Aegean (March 2009-January 2014).
- Professor, Department of Mathematics, University of the Aegean (February 2014-April 2021).
- Professor, Department of Mathematics, University of Thessaly (April 2021-).

Experience in Distance Higher Education & Relevant Educational Technologies

Started from 2011, I am continuously serving as an *adjunct faculty member* in Hellenic Open University (HOU), the public academic institute in Greece providing distance education at both undergraduate and postgraduate level. For that purpose, it develops and implements appropriate learning material and methods of teaching. For the academic years 2017-2020, I am serving as a coordinator of the postgraduate course "MSM61/80 Computational Methods and Software in Mathematics" within the M. Sc. program M. Sc. in Mathematics". See https://www.eap.gr/en/courses/131-master-s-in-mathematics-msc/5022-msm80-computational-methods-and-software-for-mathematics, for a short description of the course.

In 2016, I was certified as instructor specialized in distance learning and relevant educational web-platforms.

Research Interests

- Infinite Dimensional Dynamical Systems and Partial Differential Equations.
- Applied Mathematical Analysis.

Publications

- 47 refereed publications in international Journals (1 invited).

(For the complete list of publications see Section I).

- 1 Book (edited).

Citations

> 350 non-self citations (source: only ISI Web of Science & Scopus).

List of Collaborators

G. Abbas (Government College University), Z. Anastassi (De Montfort University), J. E. Allen (University of Oxford), V. Achilleos (Université du Maine), A. R. Bishop (Center of

Nonlinear Studies, LANL), E. Charalambidis (California Polytechnic State University), J. Cuevas (University of Seville), F. Diakonos (University of Athens), J. C. Eilbeck (Heriot-Watt University, Edinburgh), G. Fotopoulos (Khalifa University), D. J. Frantzeskakis (University of Athens), N. Gialelis (University of Athens), M. Haragus (University of Franche-Comté), D. Hennig (University of Thessaly), T. P. Horikis (University of Ioannina), G. James (Grenoble INP- Ensimag), P. G. Kevrekidis (University of Massachusetts), V. Koukouloyannis (Qatar University), A. Lyberopoulos (University of the Aegean), M. Molina (Univeristy of Chile), H. Nistazakis (University of Athens), F. Palmero (University of Seville), B. Sánchez-Rey (University of Seville), Y. Shen (University of Texas, Dallas), N. Stavrakakis (National Technical University of Athens), J. Sullivan (University of Massachusetts), I. G. Stratis (University of Athens), G. Theocharis (Université du Maine), P. Xanthopoulos (Max-Planck Institute, IPP Greifswald), A. Yannacopoulos (Athens University of Economy and Business Science), N. Whitaker (University of Massachusetts), H. Yue (University of Massachusetts), N. Zographopoulos (National Military Academy Evelpidon).

Conference Talks	$>$ 30 talks in conferences, colloquiums and seminars. (See Section II for details on selected invited talks).

Service to the Community

- Referee $>$ 40 international mathematical journals.
- Member of the Editorial Board for 3 international journals.
- Reviewer in Mathematical Reviews, American Mathematical Society.
- Project evaluator for Hellenic Foundation for Research & Innovation [HFRI (ΕΛΙΔΕΚ)].
- Project evaluator for General Secretariat of Research and Technology (GSRT), Ministry of Development.
- Member of the organizing and scientific committee in various conferences and workshops (see section II for selected activities).

Research Funding

1. Project «ΕΔΒΜ34, Support of Researchers with an emphasis to Young Researchers» entitled, *Localized and quasi-periodic solutions of nonlinear partial differential equations: Dynamics routes from mathematical ecology to nonlinear physics*: funded by the General Secretariat of Research and Technology (GSRT), Ministry of Development, (2018). Rank: 29/2649. Grant: 40000 Euros.
2. (9/8/2016-9/8/2019) *Splitting resonator based nonlinear metamaterials: from few to many, theory and experiments*. Program NPRP 9-329-1-067 funded by QNRF (Qatar National Research Fund) Grant: 764.000$. <u>Position</u>: Member of the Main Research Group.
3. (10/2/2016-10/2/2019) *Rogue Waves: From Oceans to Microwaves and Light*. Program NPRP8-764-1-160 funded by QNRF (Qatar National Research Fund) Grant: 810.000$. <u>Position</u>: Member of the Main Research Group.
4. (1/3/2004-31/8/2007) Project of basic research under the title: *Dynamics of Infinite Discrete and Continuous Dimensional Systems and Applications*, NTUA. Funded by the «PYTHAGORAS» project by the Ministry of Education (EPEAEK II). Grant: 80.000 Euros. <u>Position</u>: Member of the Main Research Group.
5. (1/3/2004-31/8/2007) Project of basic research under the title: *Theoretical and Numerical Study of Evolution and Stationary Partial Differential Equations*, University of the Aegean. Funded by the «PYTHAGORAS» project by the Ministry of Education (EPEAEK II). Grant: 80.000 Euros. [Contract Number: 12/1356] <u>Position</u>: Member of the Main Research Group.
6. (1/1/2004-31/12/2005) Project of basic research under the title: C^*-*Algebras and Operator Theory*. Funded by the «ΕΠΕΠ 2004» project by the Research Unit of the University of the Aegean. Grant: 8.000 Euros. <u>Position</u>: Member of the Main Research Group.

	7. (1/9/2002-31/8/2004) Project of basic research under the title: *Analysis of Nonlinear Elliptic & Evolution Equations and Systems.* Funded by the «THALES» project from the Committee of Fundamental Research of National Technical University of Athens, Greece. Grant: 2.400.000 Drch $\cong$ 7000 Euros. Position: Research Associate.
	8. 1/1/2000-31/9/2001) PENED – 1999 under the title: *Dynamics of Phase Transitions and of the related Transitional Phenomena in Alloys*. Funded by the General Secretariat for Researche and Technology (GSRT) Grant: 161000 Euros. [Contract Number: 99EΔ527]. Position: Research Associate.
Teaching Experience	• Undergraduate courses [University of the Aegean]: Calculus, Ordinary Differential Equations, Partial Differential Equations, Numerical Analysis, Real Analysis and Measure Theory, Functional Analysis, Introductory Physics, Complex Analysis, Classical Mechanics.
	• Graduate courses [University of the Aegean]: Applied Mathematical Models, Ordinary Differential Equations and Dynamical Systems, Mathematical Physics, Partial Differential Equations.
	• Graduate Course [Hellenic Open University]: Computational Methods and Software in Mathematics.
	• Ph. D theses supervised: Sevastos Diamantidis (2017), Konstantinos Vetas (2018).
	• M.Sc dissertations supervised: I have supervised 39 M.Sc. dissertations in the Department of Mathematics of the University of the Aegean, and 30 dissertations in Hellenic Open University.
	• Undergraduate dissertations supervised: I have supervised 12 undergraduate dissertations in the Department of Mathematics of the University of the Aegean.
Administrative Experience & Duties	• Head of the Department of Mathematics, University of the Aegean (2009-2013).
	• Member of the Postgraduate Studies Committee, Department of Mathematics-University of the Aegean (2003-2015).

I. List of Publications

A. Book (Edited)

R. Carretero-González, J. Cuevas, D. J. Frantzeskakis, N. I. Karachalios, P. G. Kevrekidis, F. Palmero. (eds.) *Localized Excitations in Nonlinear Complex Systems: Current State of the Art and Future Perspectives.* NONLINEAR SYSTEMS AND COMPLEXITY **7,** Springer, 2014.

B. Refereed Articles

   48.   Dirk Hennig and Nikos I. Karachalios. *Dynamics of nonlocal and local discrete Ginzburg-Landau equations: global attractors and their congruence*. NONLINEAR ANALYSIS (2022), article in press. Preprint: https://arxiv.org/abs/2104.00338

  47. T. P. Horikis, Nikos I. Karachalios and D. J. Frantzeskakis. *Dynamics of a Higher-Order Ginzburg–Landau-Type Equation.* Nonlinear Analysis, Differential Equations, and Applications, SPRINGER OPTIMIZATION AND ITS APPLICATIONS **173** (2021), 187-207.

  46. S. Diamantidis, T. P. Horikis and Nikos I. Karachalios. *Exciting extreme events in the damped and AC-driven NLS equation through plane wave initial conditions.* CHAOS **31** (2021), no. 5, 053103, (20 pp).

 45. N. Gialelis, N. I. Karachalios and I. G. Stratis. *Regularity of nonvanishing-at infinity or at the boundary-solutions of the defocusing nonlinear Schrödinger equation.* COMMUNICATIONS IN PARTIAL DIFFERENTIAL EQUATIONS **46** (2021), 233-281 (49pp).

44. G. Abbas, P. G. Kevrekidis, J. E. Allen, V. Koukouloyannis, D. J. Frantzeskakis, and N. I. Karachalios, Propagation of periodic wave trains along the magnetic field in a collision-free plasma. JOURNAL OF PHYSICS A: MATHEMATICAL AND THEORETICAL **53** (2020) no. 42, 425701 (17pp).

43. J. Sullivan, E. G. Charalampidis, J. Cuevas-Maraver, P. G. Kevrekidis and N. I. Karachalios. *Kuznetsov-Ma breather-like solutions in the Salerno model.* EUROPEAN PHYSICAL JOURNAL PLUS **135** (2020) 607, 1-12.

42. J. E. Allen, D. J. Frantzeskakis, N. I. Karachalios, P. G. Kevrekidis and V. Koukouloyannis. *Solitary and Periodic Waves in Collisionless Plasmas: The Adlam-Allen Model Revisited.* PHYSICAL REVIEW E **102** (2020), 013209 (14pp).

41. N. I. Karachalios, P. Kyriazopoulos and K. Vetas. *The Lefever-Lejeune nonlinear lattice: convergence dynamics and the structure of equilibrium states.* PHYSICA D: NONLINEAR PHENOMENA **409** (2020), 132487 (21pp).

40. G. Fotopoulos, N. I. Karachalios, V. Koukouloyannis and K. Vetas. The linearly damped nonlinear Schrödinger equation with localized driving: spatiotemporal decay estimates and the emergence of extreme wave events. ZEITSCHRIFT FÜR ANGEWANDTE MATHEMATIK UND PHYSIK **71**:3 (2020) (23pp).

39. G. Fotopoulos, D. J. Frantzeskakis, N. I. Karachalios, P. G. Kevrekidis, V. Koukouloyannis and K. Vetas. Extreme wave events for a nonlinear Schroedinger equation with linear damping and Gaussian driving. COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION **82** (2020), 105058 (14pp).

38. N. I. Karachalios, P. Kyriazopoulos and K. Vetas. *Excitation of Peregrine-type waveforms from vanishing initial conditions in the presence of periodic forcing.* ZEITSCHRIFT FÜR NATURFORSCHUNG A **75** (2019), 371-382. <u>Editor's choice free access article</u>.

37. G. Fotopoulos, N. I. Karachalios, V. Koukouloyannis and K. Vetas. Collapse dynamics for the discrete nonlinear Schrödinger equation with gain and loss. COMMUNICATIONS IN NONLINEAR SCIENCE AND NUMERICAL SIMULATION **72** (2019), 213-231.

36. D. J. Frantzeskakis, N. I. Karachalios, P. G. Kevrekidis, V. Koukouloyannis and K. Vetas. Dynamical transitions between equilibria in a dissipative Klein-Gordon lattice. JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS **472** (2019), 546-576.

35. Z. A. Anastassi, G. Fotopoulos, D. J. Frantzeskakis, T. P. Horikis, N. I. Karachalios, P. G. Kevrekidis, I. G. Stratis and K. Vetas. *Spatiotemporal algebraically localized waveforms for a nonlinear Schrödinger model with gain and loss.* PHYSICA D: NONLINEAR PHENOMENA **355** (2017), 24–33.

34. J. Cuevas-Maraver, P.G. Kevrekidis, D.J. Frantzeskakis, N.I. Karachalios, M. Haragus and G. James. *Floquet Analysis of Kuznetsov--Ma breathers: A Path Towards Spectral Stability of Rogue Waves.* PHYSICAL REVIEW E **96** (2017), 012202 (8pp).

33. V. Achilleos, A. R. Bishop, S. Diamantidis, D. J. Frantzeskakis, T. P. Horikis, N. I. Karachalios and P. G. Kevrekidis. *The dynamical playground of a higher-order cubic Ginzburg-Landau equation: from orbital connections and limit cycles to invariant tori and the onset of chaos.* PHYSICAL REVIEW E **94** (2016), 012210 (10pp).

32. V. Achilleos, S. Diamantidis, D. J. Frantzeskakis, T. P. Horikis, N. I. Karachalios and P. G. Kevrekidis. *Collapse for the higher-order nonlinear Schrödinger equation.* PHYSICA D: NONLINEAR PHENOMENA **316** (2016), 57-68.

31. V. Achilleos, S. Diamantidis, D. J. Frantzeskakis, N. I. Karachalios and P. G. Kevrekidis. *Conservation laws, exact travelling waves and modulation instability for an extended nonlinear Schrödinger equation.* JOURNAL OF PHYSICS A: MATHEMATICAL AND THEORETICAL **48** (2015) no. 35, 355205 (33 pp).

30. H. Yue, M. Molina, P.G. Kevrekidis and N.I. Karachalios. *Self trapping transition for a nonlinear impurity within a linear chain.* JOURNAL OF MATHEMATICAL PHYSICS **55** (2014), no.10, 102703 (25pp).

29. N.I. Karachalios, B. Sánchez-Rey, P.G. Kevrekidis and Jesús Cuevas. *Breathers for the Discrete Nonlinear Schrödinger equation with nonlinear hopping.* JOURNAL OF NONLINEAR SCIENCE **23** (2013), no. 2, 205-239.

28. V. Achilleos, A. Álvarez, J. Cuevas, D. J. Frantzeskakis, N. I. Karachalios, P. G. Kevrekidis and B.

4

Sánchez-Rey. *Escape Dynamics in the Discrete Repulsive φ^4-Model*. PHYSICA D: NONLINEAR PHENOMENA **244** (2013), no. 1, 1-24.

27. Y. Shen, P. G. Kevrekidis, N. Whitaker, N. I. Karachalios and D. J. Frantzeskakis. *Finite-temperature dynamics of matter-wave dark solitons in linear and periodic potentials: an example of an anti-damped Josephson junction*. PHYSICAL REVIEW A: ATOMIC, MOLECULAR, AND OPTICAL PHYSICS **86** (2012), 033616 (13pp).

26. V. Achilleos, G. Theocharis, P.G. Kevrekidis, N.I. Karachalios, F.K. Diakonos and D.J. Frantzeskakis. *Stationary States of A Nonlinear Schrödinger Lattice with A Harmonic Trap*. JOURNAL OF MATHEMATICAL PHYSICS **52** (2011), no. 9, 092701 (25pp)*.

 *Η εργασία επιλέχθηκε για το τεύχος Οκτωβρίου 2011 της συλλογής Virtual Journal of Atomic Quantum Fluids, από την εκδοτική ομάδα (W. Ketterle, Markus Greiner and Peter Zoller). https://www.aip.org/news/2009/aps-and-aip-launch-virtual-journal-atomic

25. Jesús Cuevas, Nikos Karachalios and Faustino Palmero. *Energy thresholds for the existence of breather solutions and traveling waves on lattices.* A. A. Pankov and D. E. Pelinovsky (eds.): The mathematics of nonlinear lattices. APPLICABLE ANALYSIS **89** (2010), no. 9, 1351–1385. (Invited Article).

24. Nikos Karachalios and Nikos Zographopoulos. *The semiflow of a reaction-diffusion equation with a singular potential.* MANUSCRIPTA MATHEMATICA **130** (2009) no. 1, 63-91.

23. Jesús Cuevas, Nikos Karachalios and Faustino Palmero. *Lower and upper estimates on the excitation threshold for breathers in DNLS lattices.* JOURNAL OF MATHEMATICAL PHYSICS **50** (2009), no. 11, 112705 (10 pp).

22. Nikos Karachalios. *A remark on the dimension of the attractor for the Dirichlet problem of the complex Ginzburg-Landau equation.* JOURNAL OF MATHEMATICAL PHYSICS **50** (2009), no. 8, 082701 (8pp).

21. Nikos Karachalios and Nikos Zographopoulos. A sharp estimate and change on the dimension of the attractor for singular semilinear parabolic equations. ARCHIV DER MATHEMATIK **91** (2008) no.6, 564-576.

20. Nikos Karachalios. *The number of bound states for a Discrete Schrödinger operator on $Z^N, N \geq 1$-lattices.* JOURNAL OF PHYSICS A: MATHEMATICAL AND THEORETICAL **45** (2008) no. 45, 455201 (14 pp).

19. Jesús Cuevas, Chris Eilbeck and Nikos Karachalios. *Thresholds for breather solutions of the Discrete Nonlinear Schrödinger equation with saturable and power nonlinearity.* DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS **A 21** (2008) no.2, 445-475.

18. Jesús Cuevas, Chris Eilbeck and Nikos Karachalios. *A lower bound for the power of periodic solutions of the defocusing Discrete Nonlinear Schrödinger equation.* DYNAMICS OF PARTIAL DIFFERENTIAL EQUATIONS **5** (2008) no. 1, 69-85.

17. Nikos Karachalios. *Weyl's type estimates on the eigenvalues of critical Schrödinger operators.* LETTERS IN MATHEMATICAL PHYSICS **83** (2008), no. 2, 189-199.

16. Nikos Karachalios, Hector Nistazakis and Athanasios Yannacopoulos. *Asymptotic Behavior of Solutions of Complex Discrete Evolution Equations: The Discrete Ginzburg-Landau Equation.* DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS **A** 19 (2007) no. 4, 711-736.

15. Nikos Karachalios and Athanasios Lyberopoulos. *On the dynamics of a degenerate damped semilnear wave equation on R^N: The non-compact case.* DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS **A** Special Volume (2007), 531-540.

14. Nikos Karachalios. *Global Existence in infinite lattices of nonlinear oscillators: The Discrete Klein-Gordon equation.* GLASGOW MATHEMATICAL JOURNAL **48** (2006) no. 3, 463-482.

13. Nikos Karachalios and Athanasios Yannacopoulos. *The existence of a global attractor for the Discrete Nonlinear Schrödinger equation II: Compactness without tail estimates in $Z^N, N \geq 1$-lattices.* PROCEEDINGS SECTION A: MATHEMATICS-ROYAL SOCIETY OF EDINBURGH **137**A (2007), 63-76.

12. Nikos Karachalios and Nikos Zographopoulos. *On the dynamics of a degenerate parabolic equation: Global bifurcation of stationary states and convergence.* CALCULUS OF VARIATIONS AND PARTIAL DIFFERENTIAL EQUATIONS **25** (2006), no. 3, 361-393.

11. Nikos Karachalios. *A remark on the existence of breather solutions for the Discrete Nonlinear Schrödinger equation: The case of the site dependent anharmonic parameter.* PROCEEDINGS OF THE EDINBURGH MATHEMATICAL SOCIETY **49** (2006), no. 1, 115-129.

10. Nikos Karachalios and Athanasios Yannacopoulos. *Global existence and global attractors for the Discrete Nonlinear Schrödinger equation.* JOURNAL OF DIFFERENTIAL EQUATIONS **217** (2005) no. 1, 88-123.

9. Nikos Karachalios, Nikos Stavrakakis and Pavlos Xanthopoulos. *Parametric exponential energy decay for dissipative electron-ion plasma waves.* ZEITSCHRIFT FÜR ANGEWANDTE MATHEMATIK UND PHYSIK **56** (2005) no.2, 218-238.

8. Nikos Karachalios and Nikos Zographopoulos. *Global attractors and convergence to equilibrium for degenerate Ginzburg-Landau and parabolic equations.* NONLINEAR ANALYSIS 63 (2005), no. 5-7, 1749-1768.

7. Nikos Karachalios and Nikos Zographopoulos. *Convergence towards attractors for a degenerate Ginzburg-Landau equation.* ZEITSCHRIFT FÜR ANGEWANDTE MATHEMATIK UND PHYSIK **56** (2005), no. 1, 11-30.

6. Nikos Karachalios, Nikos Stavrakakis and Pavlos Xanthopoulos. *Asymptotic behavior of solutions for a semibounded nonmonotone evolution equation.* ABSTRACT AND APPLIED ANALYSIS (2003), no. 9, 521--538.

5. Nikos Karachalios and Nikos Stavrakakis. *Estimates on the dimension of a global attractor for a semilinear dissipative wave equation on R^N.* DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS **A 8** (2002), no. 4, 939–951.

4. Nikos Karachalios and Nikos Stavrakakis. *Global attractor for the weakly damped driven Schrödinger equation in $H^2(R)$.* NoDEA-NONLINEAR DIFFERENTIAL EQUATIONS AND APPLICATIONS. **9** (2002), no.3, 347-360.

3. Nikos Karachalios and Nikos Stavrakakis. *Asymptotic behavior of solutions of some nonlinearly damped wave equations on R^N.* TOPOLOGICAL METHODS IN NONLINEAR ANALYSIS **18** (2001), no. 1, 73—87.

2. Nikos Karachalios and Nikos Stavrakakis. Global existence and blow-up results for some nonlinear wave equations on R^N. ADVANCES IN DIFFERENTIAL EQUATIONS **6** (2001), no. 2, 155-174.

1. Nikos Karachalios and Nikos Stavrakakis. *Existence of a global attractor for semilinear dissipative wave equations on R^N.* JOURNAL OF DIFFERENTIAL EQUATIONS **157** (1999) no. 1, 183-205.

Databases Links: AMS-Mathematical Reviews, zbMATH (for subscribers to AMS-MR and zbMath).

https://orcid.org/0000-0002-5580-3957

C. Refereed Proceedings

C1. Nikos Karachalios, Hector Nistazakis and Athanasios Yannacopoulos. *Remarks on the asymptotic behavior of solutions of complex discrete Ginzburg-Landau equations.* DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS A Supplement Volume (2005), 476-486. Proceedings of the AIMS Fifth Inernational Conference on Dynamical Systems and Differential Equations, June 16-19 2004, Los Angeles, USA (Prepublication of the results of article 22).

C2. N. I. Karachalios and N. M. Stavrakakis, *Functional Invariant Sets for Hyperbolic Problems on R^N.* International Conference on Differential Equations –Equadiff 99, World Scientific 638-640, Berlin (1999) (Prepublication of the results of article 33).

C3. N. I. Karachalios and N. M. Stavrakakis, *Existence and Asymptotic Behavior of Solutions of Hyperbolic Problems on R^N.* CEREMATH, Dept. of Mathematics, Université Toulouse I, France, (1997), 1-10. (Prepublication of the results of article 37).

C4. N. I. Karachalios and N. M. Stavrakakis, *Hyperbolic Problems on all of R^N: Global Existence and Blow-up Results.* CEREMATH, Dept. of Mathematics, Université Toulouse I, France, (1998), 12-23. (Prepublication of the results of articles 35 & 36).

D. Proceedings

D1. N. I. Karachalios, Hector E. Nistazakis and A. N. Yannacopoulos. *Existence and long time behavior of localized solutions of Complex Discrete Ginzburg-Landau equations.* Proceedings of the 10th Pan-Hellenic Conference on Mathematical Analysis.

D2. N. I. Karachalios. *Global Attractor for the Nonlinear, Weakly Damped Schroedinger Equation in* $H^2(R)$. Proceedings of the International Conference in Mathematical Analysis, in Memoriam of C. Papakyriakopoulos, NTUA University Press, 183-192, 2002.

D3. N. I. Karachalios and N. M. Stavrakakis. *Global Attractors for nonlinear hyperbolic equations in unbounded domains.* Special Volume in honor of Professor J. Mittas, Aristotle University of Thessaloniki University Press, 191-216, 2000.

D4. N. I. Karachalios and N. M. Stavrakakis. *Asymptotic Behavior of Semilinear Dissipative Wave Equations on* R^N. Proceedings of the 6th Pan-Hellenic Conference on Analysis, Samos, Greece, 105-110, ZHTH Publications 1998.

II. Other professional activities (invited talks-service to the scientific community). Fellowships & awards.

Selected Talks

- 5th AIMS International Conference on Dynamical Systems and Differential Equations, June 16-19 2004, Los Angeles, USA (30min invited presentation).
- 4th World Congress of Nonlinear Analysis, July 3-10, 2004, Orlando-Florida, USA (45min invited presentation).
- 6th AIMS International Conference on Dynamical Systems and Differential Equations, June 25-28 2006, University of Poitiers, France (30min invited presentation).
- Localized excitations in Nonlinear Complex systems, 24-27 July 2009, University of Seville, Spain (LENCOS 2009) (30min invited presentation).
- 8th AIMS International Conference on Dynamical Systems and Differential Equations, May 25-28 2010, Dresden University of Technology, Germany (30min invited presentation).
- Mathematical Analysis for young researchers, National and Kapodistrian University of Athens, November 26-28 2010 (one of the main presentations).
- Nonlinear Waves and Solitons in Lattices: A meeting in honour of Chris Eilbeck on his retirement, International Centre for Mathematical Sciences (ICMS), Edinburgh, 4-5 April 2011 (one of the main presentations). http://www.maths.nottingham.ac.uk/personal/jadw/jce/
- Interdisciplinary workshop on Quantum Mechanics and Dynamical Systems. Granada, Spain. October 8-10, 2011 (One of the main presentations).
- Analysis and Applications of Localized Structures in Nonlinear Media. Lorenz Center, Leiden, the Netherlands August 29-September 1, 2016 .
- Department of Mathematics, Statistics and Physics, Qatar University, May 28 2018 (presentation within the framework of the QNRF program NPRP8-764-1-160).
- Mathematical Biology on the Mediterranean Conference 1-14 September 2019, University of the Aegean, Karlovassi, Samos, Greece.
- «Travelling Waves in Continuous and Discrete Systems». 2021 e-Summer School in Mathematical Biology: Mathematical Modeling of infectious and non-infectious diseases. Hellenic Open University , 9-12 September 2021.
- «The closeness of the Ablowitz-Ladik lattice to the Discrete lattice to the Discrete Nonlinear Schrödinger equation». 2nd Online Conference on Nonlinear Dynamics and Complexity, October 4-6 2021 Greenwich Mean Time, Portugal.

Member of the Scientific & Organizing Committee in conferences & workshops	• Member of the Organizing Committee: *School in Geometric Analysis.* Organized by the Department of Mathematics-University of the Aegean and the National University of Ireland Maynooth. Karlovassi, Samos, Greece, May 31-June 5, 2010. • Member of the Organizing Committee: *Harmonic Analysis in Samos.* Organized by the Department of Mathematics-University of the Aegean and the Department of Mathematics of the Aristotle University of Thessaloniki. Karlovassi, Samos, Greece, September 22-25, 2009. • Member of the Organizing Committee: *Dynamics in Samos 2010 - Workshop on Differential Equations, Dynamical Systems and Applications.* Organized by the Department of Mathematics-University of the Aegean and the Division of Mathematics of the School of Applied Mathematics and Physical Sciences of the National Technical University of Athens. Karlovassi, Samos, Greece, August 31-September 3, 2010. • Member of the Scientific Committee: 2nd Conference on Localized excitations in Nonlinear Complex systems, 9-12 July 2012 (LENCOS' 12), University of Seville, Spain. • Member of the Scientific Committee: Modern Mathematical Methods in Science and Technology (M3ST 2012), organized by the Department of Mathematics, University of Athens. Kalamata, Greece , August 26 – August 28, 2012. • Member of the Scientific Committee: Modern Mathematical Methods in Science and Technology (M3ST 2015), organized by the Department of Mathematics, University of Athens. Kalamata, Greece , August 30 – September 1, 2015.
Editorial Activities	• Member of the Editorial Board: **Discrete Dynamics in Nature and Society** (Impact Factor 1.348. SJR Quartile: Q3, Modeling and Simulation). **Heliyon Mathematics** (SJR Quartile: Q1, Interdisciplinary, Impact Factor 1.857). **Open Physics** (SJR Quartile: Q4, Physics and Astronomy, Impact Factor 1.067).
Refereeing Services	• *AIMS-Mathematics, Annales Polonici Mathematici, Applied Mathematics Letters, Applicable Analysis, Asymptotic Analysis, Boundary Value Problems, Chaos, Chaos Solitons and Fractals, Communications in Nonlinear Science and Numerical Simulations, Complexity, Chinese Journal of Physics, Communications in Pure and Applied Analysis, Discrete and Continuous Dynamical Systems-Series A, Discrete and Continuous Dynamical Systems-Series S, Electronic Journal of Differential Equations, European Physical Journal, Glasgow Mathematical Journal, Israel Journal of Mathematics, Journal of Applied Mathematics, Journal of Computational and Applied Mathematics, Journal of Differential Equations, Journal of Dynamics and Differential Equations, Journal of Evolution Equations, Journal of Mathematical Analysis and Applications, Journal of Physics A: Mathematical and Theoretical, Journal of Mathematical Physics, Journal of Nonlinear Evolution Equations, Letters in Mathematical Physics, Mathematical Methods in the Applied Sciences, Mathematics and Computers in Simulations, Nonlinear Analysis: Theory, Methods, Applications, Nonlinear Analysis: Series B, Nonlinear Differential Equations and Applications (NoDEA), Nonlinearity, Nonlinear Dynamics, Numerical Methods in Partial Differential Equations, Physics Letters A, Results in Mathematics, Proceedings of the Royal Society of Edinburgh-Section A: Mathematics, Royal Society of London: Proceedings A, Studies in Applied Mathematics, Zeitschrift für Angewandte Mathematik und Physik, Zeitschrift für Naturforschung A.*

- *Special Volume Degenerate and Singular Parabolic and Elliptic Equations (C. V. Pao and W. Ruan, eds.), International Journal of Dynamical Systems and Differential Equations.*
- Reviewer: Mathematical Reviews-American Mathematical Society.

Fellowships & Awards

- Miller Scholarship, Department of Mathematics, University of Missouri-Columbia, 2004.
- IKY (National Scholarship Foundation) Postdoctoral Fellow (Contract Number: 349), 2001-2002.
- Award *Thomaidi* –National Technical University of Athens, for excellence in Postgraduate Studies, 1999.
- *Papakyriakopoulos* Postgraduate Scholarship, National Technical University of Athens (1995-1999).
- Distinction, *M. Sc. in the Mathematics of Nonlinear models*-University of Edinburgh (for being 1st in the class of 1994-1995).