Athanassios S. Fokas, Ph.D.-M.D.
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Education

B.S. in Aeronautics, Imperial College, UK, June 1975; Ph.D. in Applied Mathematics, California Institute of Technology, USA, June 1979 (supervisor: P. A. Lagerstrom); M.D, School of Medicine, University of Miami, USA, June 1986.

Employment

Appointed in 1982 Assistant Professor in the Department of Mathematics and Computer Science, Clarkson University, USA. Promoted in 1986 to Professor and Chairman, a position held until 1993, when appointed to a Chair in Mathematical Sciences in Loughborough University, UK. Appointed in 1995 to a Chair in Applied Mathematics at Imperial College. Appointed in 2002 to the inaugural Chair of Nonlinear Mathematical Science at the Department of Applied Mathematics and Theoretical Physics of the University of Cambridge. In January 2021 he became Professor Emeritus and was appointed Director of the Legendary Programme in Mathematics in the University of Cambridge, funded by the Gianna Aggelopoulou Programme in Science and Innovation.

Visiting Professor at the University of Stanford for the academic year 1986-87 where he collaborated with J. B. Keller, and at Harvard University in the autumn of 2012 where he taught a course on the unified transform (now known as the Fokas method).

Appointed in 2015 Adjunct Professor of the Departments of Electrical and Computer Engineering of the University of Southern California, USA, for a period of four years. Appointed in 2019 Adjunct Professor in the Department of Civil & Environmental Engineering and in the Department of Biomedical Engineering, University of Southern California, USA, for a period of five year.

Awards and Honours

Fokas' first significant award was the 1975 Governors Prize of Imperial College, awarded to the best student in Aeronautics. Since then, he has been the recipient of several honours, including those mentioned below.

For the academic year 1979-1980 he was honoured at the Department of Applied Mathematics of California Institute of Technology with the prestigious Saul Kaplun Fellowship.

In 2000 he was the recipient of the Naylor Prize of the London Mathematical Society. This is awarded every two years, and although it was given in 1999 (to S.W. Hawking) it was decided to be awarded in 2000

on the occasion of the Millennium. In 2004 he was awarded the Aristeion Prize of the Academy of Athens, which is the most prestigious prize of the Academy given every four years to a single scholar chosen from the Sciences, Engineering, or Medicine. In 2006 he was awarded by the President of the Hellenic Republic the Excellence Prize of the Bodossaki Foundation, jointly with Professor D. Christodoulou (this premier scientific prize was awarded in the period 2002-2012 every two years to scientists of Greek origin, as chosen by an international committee chaired by a Nobel Laureate). In 2023 he was awarded the Blaise Pascal Medal of the European Academy of Sciences. He is the 2024 recipient of the SIAM's Kruskal award/lecture, considered the most prestigious prize in the area of nonlinearity.

In December 2004 he was elected a Full Member of the Academy of Athens (this is the National Academy of Greece, consisting of about 45 members covering the Sciences, Engineering, Medicine, Arts, Letters, Political and Ethical Sciences; Fokas is the first ever applied mathematician to be elected in the Academy). Also, he is a member of all three major Academies of Europe, namely, European Academy of Sciences (2010), European Academy of Sciences and Arts (2021), and Academia Europaea (2023).

In 2005 he was Decorated with the Order of Phoenix by the President of the Hellenic Republic (only 15 people from Greece or abroad are included every year in the list of Honours).

In 2005, he was elected a Professorial Fellow of Clare Hall. In 2009, he was awarded a Fellowship of the Guggenheim Foundation, USA. In 2019, he was elected Fellow of the American Institute for Medical and Biological Engineering (only a handful of mathematicians are fellows of this prestigious College). In 2024 he was elected a Fellow of the American Mathematical Society.

For the period 2015-2021 he was awarded a Senior Research Fellowship from the Engineering and Physical Sciences Research Council (EPSRC). During this period, he was on a fully paid leave of absence from the University of Cambridge which allowed him to concentrate on his research.

The volume *Chaos, Fractals and Complexity*, published in 2023 in the series 'Springer Proceedings in Complexity', is dedicated to Fokas' 70th birthday. Part IV of this volume, titled 'Fokas and Mathematics', contains several papers inspired by some of his breakthroughs. Also, there is a paper titled, 'Athanasios Fokas: a Renaissance Scientist', where the seminal contributions of Fokas in Mathematics, Engineering, Physics, Biology, and Medicine are summarised. These proceedings are based on the 28th Summer School-Conference on Dynamical Systems and Complexity, July 2022. Two days of this conference were dedicated to 24 lectures inspired by some of the most important works of Fokas. In 2004, the journal Studies in

Applied Mathematics published a Special Issue, Integrable System and Applications celebrating the 70th birthday of Thanasis Fokas.

He has received honorary degrees from eight universities. Also, in special ceremonies, Fokas has received the following honours: In 2010, he was appointed Ambassador of Hellenism, Greece, in the presence of the President of the Hellenic Republic. In 2019, he received a Life Achievement Award from the Hellenic Mathematical Association (in the last 40 years, only D. Christodoulou has received this honour). In 2014, he was honoured by the Hellenic Medical Society of UK, in 2015 by the European Musculoskeletal Oncology Society, in 2016 by the Greek-American Medical Society, and in 2023 by the Society of the Ionian Islands.

He is an honorary member of the Institute of Computational and Applied Mathematics, Greece, 2002; an honorary member of the Parnassos Literary Society, Athens, Greece, 2005; an honorary citizen of Oinouses, Greece, 2004; and an honorary citizen of Delphi, Greece, 2009. He has been honoured twice by the Onassis Foundation, appointed an Onassis Senior Visiting Scholar, first at the University of Harvard, USA, in the autumn of 2012, and then, at the University of Southern California, USA, in the Spring of 2015.

ISI Web of Science has included Fokas in the list of the most highly cited researchers in the field of Mathematics (Pure Mathematics, Applied Mathematics, Probability and Statistics), http://www.isihighlycited.com. According to Google scholar, he has approximately 27,000 citations and an h-index of 81. In April of 2022, Clare Hall announced that, according to the ranking based on the h-index calculated by research.com, Fokas was ranked first among all mathematicians of all times of the two mathematics departments of the University of Cambridge, namely, the Department of Applied Mathematics and Theoretical Physics and the Department of Pure Mathematics and Theoretical Statistics. This achievement was also confirmed in the research.com announcement of April 2024. In 2020, his paper 'Rogue waves of the nonlocal Davey-Stewartson I equation', published in 2018 in Nonlinearity, received an 'Institute of Physics (IOP) Publishing Top Cited Paper Award', as one of the most cited articles within the period of 2018 to 2020 published across the entire IOP Publishing journal portfolio, consisting of 50 prestigious journals.

External Support

Fokas has the distinction of having been funded throughout his academic life in US and in UK. Specifically, in 1982-1995, he was funded by the Mathematics Section of the National Science Foundation of USA. In addition, during this period he was also supported by the Mathematics Division of the Office of the Naval Research of USA, 1982-1988, and by the Mathematics Division of the Air Force Office of Scientific Research of USA, 1987-1995. Moreover, he was funded from the time of his first appointment in UK

until his retirement from the University of Cambridge, first by SERC (1994-1997) and then by EPSRC. In addition, during this period he was also supported by the following funding bodies: the European Community, EC-TMR, 1998-2000, 2000-2002, 2002-2004, 2006-2009 and 2005-2008 when he was awarded one of only 10 chairs of excellence funded in the entire EU; the Royal Society, 2000 and 2003; MRC 2009. In addition, Fokas was a co-investigator in the 2.5 million pounds grant "Mathematical Imaging in Healthcare", 2016-2020.

Advisory and editorial and boards

Fokas has served on the International Advisory Boards of several Institutions, including the following: the Institute of Mathematical Sciences, Imperial College, UK; the Centre for Nonlinear Mathematics and Applications, Loughborough University, UK; the International Centre of Theoretical Physics–Eurasian Centre for Advanced Research (ICTP-ECAR). He is a co-founder of the Journal of Nonlinear Science; Associated Editor of the Series Progress in Physics and Mathematical Physics (Birkhäuser); member of the Editorial Board of the series Modern Mechanics and Mathematics (CRC), and of the series Program in Mathematics (de Gruyter). In 2023, jointly with G. Kastis they edited a special volume of the journal Viruses, dedicated to Covid-19. He has been a member of the Editorial Board of several Journals, including Proceedings of the Royal Society (Series A), Selecta Mathematica, Journal of Mathematical Physics, Nonlinearity, Studies in Applied Mathematics, Mathematical Physics-Analysis-Geometry, and the Journal of Mathematical Analysis and Applications.

Invited Lectures

Fokas has presented invited talks in major institutions world-wide, including in the Universities of Cambridge, Oxford, Imperial College, UCL, Harvard, Princeton, MIT, Caltech, Yale, Berkley, Columbia, UCLA, ETH and Poincare Institute.

Among his Invited Lectures are the following:

- Differential forms, Spectral Theory and Boundary Value Problems, The Naylor Lecture, London Mathematical Society, London, UK, November 23, 2001.
- Generalised Fourier Transforms, Dirichlet to Neumann Maps and the Imaging of the Brain, SIAM Invited Lecture at the Annual meeting of AMS and MAA, San Antonio, USA, January 2006.
- Integrability, Medical Imaging and Boundary Value Problems, University of Cambridge Jubilee Celebration, University of Cambridge, Cambridge, UK, September 25, 2009.
- The Interplay of the Concrete and General: From Mathematics to the Brain, The Distinguished

Lagerstrom Lecture, Department of Aerospace, California Institute of Technology, Pasadena, USA, May 9, 2014.

- Initial-Boundary Value Problems in 1+1, and Solitons in 3+1, Invited Plenary Lecture in the 2014 SIAM Conference on Nonlinear Waves and Coherent Structures, Cambridge, UK, August 11-14, 2014.

- From Acoustics to the Lindelöf Hypothesis, The Keller Colloquium in Computational Mathematics, California Institute of Technology, Pasadena, USA, October 8, 2018.

- On the Fokas method and beyond, Annual Symposium and Ceremony of the European Academy of Sciences, Real Academia de Ciencias Exactas, Físicas y Naturales, Madrid, Spain, October 23-24, 2023.

- The beauty and usefulness of the complex analysis, Invited talk in the 'International Conference on Applied Mathematics', Hong-Kong, China, May 30, 2024.

- The beauty and usefulness of the complex analysis, Martin D. Kruskal Lecture, 2024 SIAM Conference on Nonlinear Waves and Coherent Structures (NWCS24), Baltimore, Maryland, USA, June 26, 2024.

Among the sets of invited lectures delivered by Fokas are the following:

- Complex Analysis and Inverse Spectral Method in Boundary Value Problems. A four Lectures Mini course at the Poincare Institute, France, November 2003.

- New Perspectives for Boundary Value Problems and Their Asymptotic Analysis. Ten lectures as the Principal speaker in an NSF-CBMS Conference, University of Texas - Pan American, Edinburgh, USA, May 16-20, 2005.

- Boundary Value Problems and Medical Imaging. Series of twelve lectures, Harvard University, USA, September 2012.

- Three lectures within the framework of the Gentry Lecture Series, Wake Forest University, USA, Spring 2022.

Fokas has also delivered a number of lectures for the general audience, including the following:

- Mathematics and the Search of Truth, Opening Address at the 45th International Mathematical Olympiad, Athens Concert Hall (Megaron), Athens, Greece, July 11, 2004.

- Mathematics, Imaging of the Brain and the Search for Truth, Oxford University, Oxford, UK, April 28, 2005.
- Mathematics and the Brain, Athens Concert Hall (Megaron), Athens, Greece, March 31, 2006.
- Mathematics, Medical Imaging and the Search for Consciousness, Tsingua Global Vision Lecture, Tsingua University, Beijing, China, June 12, 2008.
- Innate Knowledge: From Philosophical Positions of Ancient Greeks to Neuroscience, Royal Society of Medicine, London, UK, February 27, 2010.
- The Importance of Unconscious Processes, Hippocratic Oration, Hellenic Medical Society, London, UK, November 7, 2014.
- Perception and the Essence of Mathematics, Athens Science Festival, Athens, Greece, April 24, 2018.
- Associations: Visual Perception and Reduction Versus Unification, Harvard University, Cambridge, USA, March 29, 2019.
- Perception as the Solution of an Inverse Problem, in the Colloquium series of the European Academy of Science and Art, "Science meets Art", March 4, 2022.
- The two 'big bangs' of our mental evolution, The International Centre for Primate Brain Research, Shanghai, China, May 27, 2024.
- The two 'big bangs' of our mental evolution (the inaugural talk of a new series emphasising polymathy), West Hub, Cambridge, UK, June 13, 2024.

Editorial and Advisory Boards

Fokas has served on the International Advisory Boards of several Institutions including: the Institute of Mathematical Sciences, Imperial College, UK; the Centre for Nonlinear Mathematics and Applications, Loughborough University, UK; the International Centre of Theoretical Physics–Eurasian Centre for Advanced Research (ICTP-ECAR). He is a co-founder of the Journal of Nonlinear Science; associated Editor of the Series Progress in Physics and Mathematical Physics (Birkhäuser); member of the Editorial Board of the series Modern Mechanics and Mathematics (CRC) and of the series Program in Mathematics (de Gruyter). He has been a member of the Editorial Board of several Journals, including Proceedings of the Royal Society (Series A), Selecta Mathematica, Journal of Mathematical Physics, Nonlinearity, Studies in

Applied Mathematics, Mathematical Physics, Analysis and Geometry, and the Journal of Mathematical Analysis and Applications.

Fokas was the President of the Governing body of the National Library of Greece for the period 2005-2011. He is currently the President of the scientific committee of the Laskaridis Foundation, as well as a member of the Governing Body of the Biomedical Research Foundation of the Academy of Athens (BRFAA). He serves on the Advisory Board of the Goulandris Natural History Museum, as well as of the Ionian Hall of Fame.

Fokas has been the co-organiser of several International conferences and workshops, including two workshops at the Isaac Newton Institute, as well as the 2nd International workshop "The Brain: Function, Imaging and Repair" at the Goulandris Natural History Museum/GAIA Centre (co-organised with F. Kafatos), Athens, October, 2009.

Details of External Support

- The Mathematics Section of the National Science Foundation of USA, 1982-1995.
- The National Science Foundation of USA, USA-Italy Cooperative Program, 1991-1994.
- The National Science Foundation of USA, USA-USSR Cooperative Program, 1992-1995.
- The Mathematics Division of the Office of the Naval Research of USA, 1982-1988.
- The Mathematics Division of the Air Force Office of Scientific Research of USA, 1987-1995.
- SERC, 1994-1997 (IBV Problems for Integrable Equations).
- EPSRC, 1995 (Integrability of the Einstein's Equations).
- EPSRC, 1999-2002 (Coherent Structures and the Asymptotic Behaviour of Nonlinear Integrable Equations in Multidimensions).
- EPSRC, 1999 (Random Matrices, Orthogonal Polynomials, and Riemann-Hilbert Problems).
- EC-TMR, 1998-2000 (Analytical and Numerical Aspects of PDEs Modelling Small Amplitude Long Water Waves).
- Royal Society, 2000 (Boundary Value Problems for the Laplace Equation).
- EC-TMR, 2000-2002 (Whitham equations, Asymptotics, and Algebraic Geometry).

- EPSRC, 2001 (Numerical Investigation of IBV Problems in Two and Three Dimensions).
- EPSRC, 2002 (Boundary Value Problems for Linear PDEs with Variable Coefficients and the Role of Soliton Theory in Hydrodynamics).
- EC-TMR, 2002-2004 (ODEs and PDEs in the Complex Plane).
- Royal Society, 2003 (Boundary Value Problems for the Tricomi Equation).
- EPSRC, 2003 (Soliton Generation for Time-Periodic Boundary Conditions).
- EPSRC, 2003 (A New Formulation of Water Waves in Three Dimensions and their Integrable Reductions).
- EPSRC, 2004-2008 (Boundary Value Problems for Multidimensional Nonlinear PDEs).
- EC-TMR, 2005-2008 (Magnetoencephalography- to host Professor G. Dassios as Marie Curie Chair of Excellence).
- EC-TMR, 2006-2009 (Analysis of a Novel Class of Integrable PDEs).
- LMS, 2008 (to host Professor J. Bona).
- EPSRC, 2008 (Aspects of Nonlinear Evolution PDEs).
- MRC Discipline Hopping grant, 2009 (Analytical SPECT Image Reconstruction).
- EPSRC, 2010 (Integrable Nonlinear Evolution PDEs on the Interval).
- LMS, 2010 (to host Professor G. Biondini).
- EPSRC – Materials, Mechanical and Medical Engineering – 2010-2013 (Analytical Methods For Certain Inverse Problems In Medical Imaging).
- EPSRC, 2010-2014 (Integrability in Multidimensions and Boundary Value Problems).
- EPSRC, 2015-2020 (the Unified Transform, Imaging and Asymptotics).
- EPSRC Impact Accelerator Account, 2015-2016 (3D Brain Imaging using EEG).
- EPSRC, 2016-2020, co-investigator in a 2.5 million pounds grant "Mathematical Imaging in Healthcare".

PUBLICATIONS – Text Books and Research Monographs

B1. M.J. Ablowitz and A.S. Fokas, Introduction and Applications of Complex Variables, Cambridge University Press, second edition (2003).

B2. A.S. Fokas, A.R. Its, A.A. Kapaev and V. Yu Novokshenov, Painleve Transcendents: A Riemann-Hilbert Approach, AMS (2006).

B3. A.S. Fokas, A Unified Approach to Boundary Value Problems, CBMS-NSF Regional Conference Series in Applied Mathematics, SIAM (2008).

B4. G. Dassios and A.S. Fokas, Electroenchephalography and Magnetoencephalography: An Analytical-Numerical Approach, De Gruyter (2019).

B5. M.J. Ablowitz and A.S. Fokas, Introduction to Complex Variables and Applications, Cambridge University Press (2021).

B6. A.S. Fokas and E. Kaxiras, Modern Mathematical Methods for Computational Sciences and Engineering, World Scientific (2022).

B7. A.S. Fokas, Ways of Comprehending (in Greek), Broken Hill Publishers (2022).

B8. A.S. Fokas, Ways of Comprehending, World Scientific (2024).

PUBLICATIONS – Books

B9. A.S. Fokas and V.E. Zakharov, eds, Important Developments in Soliton Theory, Springer-Verlag (1993).

B10. A.S. Fokas, D.J. Kaup, A.C. Newell and V.E. Zakharov, eds, Nonlinear Processes in Physics, Springer-Verlag (1993).

B11. A.S. Fokas and I.M. Gel'fand, eds. Algebraic Aspects of Integrable Systems, In memory of I. Dorfman, Birkhauser (1996).

B12. A.S. Fokas, A. Grygorian, T. Kibble and B. Zegarlinsky, eds. Mathematical Physics 2000, Imperial College Press (2000).

B13. A.S. Fokas, A. Grygorian, T. Kibble and B. Zegarlinsky, eds. XIII International Congress of Mathematical Physics, International Press (2001).

B14. A.S. Fokas, J. Halliwell, T. Kibble and B. Zegarlinsky, eds, Highlights of Mathematical Physics, American Mathematical Society (2002).

B15. B. Engquist, A.S. Fokas, E. Hairer and A. Iserles, eds, Highly Oscillatory Problems, LMS, Lecture Notes Series 366, Cambridge University Press (2008).

B16. A.S. Fokas and B. Pelloni, eds, Unified Transform for Boundary Value Problems: Applications and Advances, SIAM (2015).

PUBLICATIONS – Editorial Contributions

B17. Scattering, R. Pike and P. Sabatier eds, Academic Press (2002). The chapter "Inverse Scattering Transforms and Nonlinear PDEs" and the chapter "Scattering in Mathematical Objects" are edited by A.S. Fokas.

B18. A.S. Fokas, N.S. Manton and R.G. Newton, eds, Integrability, Topological Solitons and Beyond, Journal of Mathematical Physics, vol 44 (2003).

B19. A.S. Fokas and G.A. Kastis, eds, Mathematical Modeling of the COVID-19 Pandemic, Viruses, MDPI (2023).

PUBLICATIONS – Patents

1. A.S. Fokas and P. Hashemzadeh, Processing Method for electroencephalogram (EEG) and Magnetoencephalography (MEG) signal to generate image data representing three-dimensional current distribution within brain, patent number: WO2015185911 A1.

PUBLICATIONS – Journals

1. D.S. Cohen, A.S. Fokas and P.A. Lagerstrom, Proof of Some Asymptotic Results for a Model Equation for Low Reynolds Number Flow, SIAM J. Appl. Math. **35**, 187-207 (1978).

2. A.S. Fokas, Group Theoretical Aspects of Constants of Motion and Separable Solutions in Classical Mechanics, J. Math. Anal. Applic. **68**, 347-370 (1979).

3. A.S. Fokas and R.L. Anderson, Group Theoretical Nature of Bäcklund Transformations, Lett. Math. Phys. **3**, 117-126 (1979).

4. A.S. Fokas, Generalized Symmetries and Constants of Motion of Evolution Equations, Lett. Math. Phys. **3**, 467-473 (1979).

5. A.S. Fokas and P.A. Lagerstrom, Quadratic and Cubic Invariants in Classical Mechanics, J. Math. Anal. Appl. **74**, 325-341 (1980).

6. A.S. Fokas and P.A. Lagerstrom, On the Use of Lie-Bäcklund Operators in Quantum Mechanics, J. Math. Anal. Appl. **74**, 342-358 (1980).

7. A.S. Fokas, A Symmetry Approach to Exactly Solvable Evolution Equations, J. Math. Phys. **21**, 1318-1325 (1980).

8. A.S. Fokas and B. Fuchssteiner, On the Structure of Symplectic Operators and Hereditary Symmetries, Lettere Al Nuovo Cimento **28**, 299-303 (1980).

9. Y.C. Yortsos and A.S. Fokas, An Analytical Solution for Linear Waterflood Including the Effects of Capillary Pressure, Society of Petroleum Engineers of AIME, SPE 9407, 115-124 (1980).

10. A.S. Fokas and B. Fuchssteiner, Bäcklund Transformations for Hereditary Symmetries, Nonlinear Anal.-Theor. **5**, 423-432 (1981).

11. B. Fuchssteiner and A.S. Fokas, Symplectic Structures, Their Bäcklund Transformations and Hereditary Symmetries, Physica D **4**, 47-66 (1981).

12. A.S. Fokas and Y.C. Yortsos, The Transformation Properties of the Sixth Painlevé Equation and One-Parameter Families of Solutions, Lettere Al Nuovo Cimento **30**, 539-544 (1981).

13. A.S. Fokas and M.J. Ablowitz, Linearization of the Korteweg-deVries and Painlevé II Equations, Phys. Rev. Lett. **47**, 1096-1100 (1981).

14. A.S. Fokas and B. Fuchssteiner, The Hierarchy of the Benjamin-Ono Equation, Phys. Lett. A **86**, 341-345 (1981).

15. A.S. Fokas and Y.C. Yortsos, On the Exactly Solvable Equation $S_t = (\beta S+\gamma)^{-2}S_{xx}+\alpha(\beta S+\gamma)^{-2}S_x$ Occurring in Two-Phase Flow in Porous Media, SIAM J. Appl. Math. **42**, 318-332 (1982).

16. A.S. Fokas and M.J. Ablowitz, On a Unified Approach to Transformations and Elementary Solutions of Painlevé Equations, J. Math. Phys. **23**, 2033-2042 (1982).

17. M.J. Ablowitz, A.S. Fokas, J. Satsuma and H. Segur, On the Periodic Intermediate Long Wave Equations, J. Phys. A **15**, 781-786 (1982).

18. A.S. Fokas and R.L. Anderson, On the Use of Isospectral Eigenvalue Problems for Obtaining Hereditary Symmetries for Hamiltonian Systems, J. Math. Phys. **23**, 1066-1073 (1982).

19. M.J. Ablowitz, A.S. Fokas and R.L. Anderson, The Direct Linearizing Transform and the Benjamin-Ono Equation, Phys. Lett. A. **93**, 375-378 (1983).

20. A.S. Fokas and M.J. Ablowitz, On the Inverse Scattering and Direct Linearizing Transforms for the Kadomtsev-Petviashvili Equation, Phys. Lett. A. **94**, 67-70 (1983).

21. A.S. Fokas and M.J. Ablowitz, The Inverse Scattering Transform for the Benjamin-Ono Equation - A Pivot to Multidimensional Problems, Stud. Appl. Math. **68**, 1-10 (1983).

22. A.S. Fokas and M.J. Ablowitz, On the Inverse Scattering of the Time Dependent Schrödinger Equation and the Associated KPI Equation, Stud. Appl. Math. **69**, 211-228 (1983).

23. M.J. Ablowitz, D. Bar Yaacov and A.S. Fokas, On the Inverse Scattering Transform for the Kadomtsev-Petviashvili Equation, Stud. Appl. Math. **69**, 135-143 (1983).

24. A.S. Fokas, Inverse Scattering of First-Order Systems in the Plane Related to Nonlinear Multidimensional Equations, Phys. Rev. Lett. **51**, 3-6 (1983).

25. A.S. Fokas and M.J. Ablowitz, Method of Solution for a Class of Multidimensional Nonlinear Evolution Equations, Phys. Rev. Lett. **51**, 7-10 (1983).

26. A.S. Fokas and M.J. Ablowitz, On the Initial Value Problem of the Second Painlevé Transcendent, Comm. Math. Phys. **91**, 381-403 (1983).

27. A.S. Fokas and M.J. Ablowitz, On the Inverse Scattering Transform of Multi-Dimensional Nonlinear Equations Related to First Order Systems in the Plane, J. Math. Phys. **25**, 2494-2505 (1984).

28. P.M. Santini, M.J. Ablowitz and A.S. Fokas, On the Limit from the Intermediate Long Wave Equation to the Benjamin-Ono Equation, J. Math. Phys. **25**, 892-899 (1984).

29. P.M. Santini, M.J. Ablowitz and A.S. Fokas, The Direct Linearization of a Class of Nonlinear Evolution Equations, J. Math. Phys. **25**, 2614-2619 (1984).

30. W. Oevel and A.S. Fokas, Infinitely Many Commuting Symmetries and Constants of Motion in Involution for Explicitly Time-Dependent Evolution Equations, J. Math. Phys. **25**, 918-922 (1984).

31. A.S. Fokas, An Inverse Problem for Multidimensional First Order Systems, J. Math. Phys. **27**, 1737-1746 (1986).

32. A.S. Fokas, Inverse Scattering and Integrability in Multidimensions, Phys. Rev. Lett. **57**, 159-162 (1986).

33. A.S. Fokas, R.A. Leo, L. Martina and G. Soliani, The Scaling Reduction of the Three-Wave Resonant System and the Painlevé VI Equation, Phys. Lett. A **115**, 329-332 (1986).

34. A.S. Fokas and P.M. Santini, The Recursion Operator of the Kadomtsev-Petviashvili Equation and the Squared Eigenfunction of the Schrödinger Operators, Stud. Appl. Math. **75**, 179-186 (1986).

35. P.M. Santini, M.J. Ablowitz and A.S. Fokas, On the Initial Value Problem for a Class of Nonlinear Integral Evolution Equations Including the Sine-Hilbert Equation, J. Math. Phys. **28**, 2310-2316 (1987).

36. A.S. Fokas, Symmetries and Integrability, Stud. Appl. Math. **77**, 253-299 (1987).

37. M.J. Ablowitz, A.S. Fokas and M.D. Kruskal, Note on Solutions to a Class of Nonlinear Singular Integro-Differential Equations, Phys. Lett. A. **120**, 215-218 (1987).

38. P.M. Santini and A.S. Fokas, Recursion Operators and Bi-Hamiltonian Structures in Multidimensions I, Comm. Math. Phys. **115**, 375-419 (1988).

39. A.S. Fokas and P.M. Santini, Recursion Operators and Bi-Hamiltonian Structures in Multidimensions II, Commun. Math. Phys. **116**, 449-474 (1988).

40. A.S. Fokas, U. Mugan and M.J. Ablowitz, A Method of Solution for Painlevé Equations: Painlevé IV, V, Physica D **30**, 247-283 (1988).

41. A.S. Fokas and P.M. Santini, Bi-Hamiltonian Formulation of the Kadomtsev-Petviashvili and Benjamin-Ono Equations, J. Math. Phys. **29**, 604-617 (1988).

42. E. Barouch, A.S. Fokas, and V. Papageorgiou, The Bi-Hamiltonian Formulation of the Landau-Lifshitz Equation, J. of Math. Phys. **29**, 2628-2633 (1988).

43. P. Clarkson, A.S. Fokas and M.J. Ablowitz, Hodograph Transformations of Linearizable Partial Differential Equations, SIAM J. Appl. Math. **49**, 1188-1209 (1989).

44. A.S. Fokas: An Initial-Boundary Value Problems for the Nonlinear Schrödinger Equations, Physica D **35**, 167-185 (1989).

45. T.S. Papatheodorou and A.S. Fokas, Evolution Theory, Periodic Particles, and Solitons in Cellular Automata, Stud. Appl. Math. **80**, 165-182 (1989).

46. A.S. Fokas, E. Papadopoulou, Y. Saridakis and M.J. Ablowitz, Interaction of Simple Particles in Soliton Cellular Automata, Stud. Appl. Math. **81**, 153-180 (1989).

47. A.S. Fokas and M.J. Ablowitz, Forced Nonlinear Evolution Equations and the Inverse Scattering Transform, Stud. Appl. Math. **80**, 253-272 (1989).

48. A.S. Fokas and P.M. Santini, Coherent Structures in Multidimensions, Phys. Rev. Lett. **63**, 1379-1333 (1989).

49. A.S. Fokas, E. Papadopoulou and Y. Saridakis, Particles in Soliton Cellular Automata, Complex Systems **3**, 615-633 (1989).

50. A.S. Fokas and P.M. Santini, Dromions and a Boundary Value Problem for the Davey-Stewartson I Equation, Physica D **44**, 99-130 (1990).

51. A.S. Fokas, E.P. Papadopoulou and Y.G. Saridakis, Soliton Cellular Automata, Physica D **41**, 297-321 (1990).

52. A.S. Fokas, E.P. Papadopoulou and Y.G. Saridakis, Coherent Structures in Cellular Automata, Phys. Lett. A **147**, 369-379 (1990).

53. A.S. Fokas and S.V. Manakov, The Dressing Method, Symmetries, and Invariant Solutions, Phys. Lett. A **150**, 369-374 (1990).

54. A.R. Its, A.V. Kitaev and A.S. Fokas, The Isomonodromic Approach in the Theory of Two-Dimensional Quantum Gravitation, Russ. Math. Surv. **45**, 155-157 (1990).

55. L.Y. Sung and A.S. Fokas, Inverse Problem of $N \times N$ Hyperbolic Systems on the Plane and the N-Wave Interactions, Comm. Pure Appl. Math. **44**, 535-571 (1991).

56. A.S. Fokas, J.B. Keller and B.D. Clarkson, Mathematical Model of Granulocytopoiesis and Chronic Myelogenous Leukemia, Cancer Res. **51**, 2084-2091 (1991).

57. L.-Y. Sung and A.S. Fokas, Inverse Problems in Multidimensions, SIAM J. of Math. Anal. **22**, 1303-1331 (1991).

58. A.S. Fokas, A.R. Its and A.V. Kitaev, Discrete Painleve Equations and Their Appearance to Quantum Gravity, Comm. Math. Phys. **142**, 313-343 (1991).

59. A.S. Fokas and R.G. Novikov, Discrete Analogues of $\bar{\partial}$-Equation and of Radon Transform, C.R. Acad. Sci., Paris **313**, 75-80 (1991).

60. A.R. Its, A.V. Kitaev and A.S. Fokas, Matrix Models of Two-Dimensional Quantum Gravity and Isomonodromy Solutions of Discrete Painlevé Equations, Zapiski Nauchn. Semin. LOMI **187**, 3-29 (1991).

61. A.S. Fokas and V. Zakharov, The Dressing Method and Nonlocal Riemann-Hilbert Problems, J. Nonlinear Sci. **2**, 109-134 (1992).

62. A.S. Fokas and Xin Zhou, On the Solvability of Painleve II and IV, Comm. Math. Phys. **144**, 601-622 (1992).

63. U. Mugan and A.S. Fokas, Schlesinger Transformations of Painlevé II-V, J. Math. Phys. **33**, 2031-2045 (1992).

64. I.Ya Dorfman and A.S. Fokas, Hamiltonian Theory Over Non-Commutative Rings and Integrability in Multidimensions, J. Math. Phys. **33**, 2504-2514 (1992).

65. A.S. Fokas, U. Mugan and Xin Zhou, On the Solvability of Painlevé I, III, and V, Inverse Probl. **8**, 757-785 (1992).

66. A.S. Fokas, A.R. Its and A.V. Kitaev, The Isomonodromy Approach to Matrix Models in 2D Quantum Gravity, Comm. Math. Phys. **147**, 395-430 (1992).

67. A.S. Fokas and A.R. Its, Soliton Generation for Initial-Boundary Value Problems, Phys. Rev. Lett. **25**, 3117-3120 (1992).

68. A.S. Fokas and L.Y. Sung, On the Solvability of the N-Wave, the Davey-Stewartson and the Kadomtsev-Petviashvili Equation, Inverse Probl. **8**, 673-708 (1992).

69. A.S. Fokas and A.R. Its, An Initial-Boundary Value Problem for the Sine-Gordon Equation in Laboratory Coordinates, Theor. and Math. Physics **92**, 388-403 (1992).

70. A.S. Fokas and H.R. Madala, Emerging Patterns and Computational Design of Filter Cellular Automata, Complex Systems **7**, 389-413 (1993).

71. A.S. Fokas, B. Grammaticos and A. Ramani, From Continuous to Discrete Painleve Equations, J. Math. Anal. and Appl. **180**, 342-360 (1993).

72. A.S. Fokas, A.R. Its and V.Yu Novokshenov, Integrable Equations with a Forcing of a Distribution Type, Stud. Appl. Math. **92**, 97-114 (1994).

73. A.S. Fokas and A.R. Its, An Initial-Boundary Value Problem for the KdV Equation, Math. Comput. Simulat. **37**, 293-321 (1994).

74. B.A. Dubrovin, A.S. Fokas and P.M. Santini, Integrable Functional Equations and Algebraic Geometry, Duke Mathematical Journal **76**, 645-668 (1994).

75. A.S. Fokas and Q.M. Liu, Generalized Conditional Symmetries and Exact Solutions of Non Integrable Equations, Theor. and Math. Physics **99**, 263-278 (1994).

76. A.S. Fokas and I.M. Gel'fand, Quadratic Poisson Algebras and Their Infinite Dimensional Generalization, J. of Math. Physics **35**, 3117-3131 (1994).

77. A.S. Fokas and I.M. Gel'fand, Integrability of Linear and Nonlinear Evolution Equations, and the Associated Nonlinear Fourier Transforms, Lett. Math. Physics **32**, 189-210 (1994).

78. A.R. Its, A.S. Fokas and A.A. Kapaev, On the Asymptotic Analysis of the Painlevé Equations Via the Isomonodromy Method, Nonlinearity **7**, 1291-1325 (1994).

79. A.S. Fokas, On the Simplest Integrable Equation in $2+1$, Inverse Probl. **10**, 19-22 (1994).

80. A.S. Fokas and Q.M. Liu, Nonlinear Interaction of Traveling Waves of Nonintegrable Equations, Phys. Rev. Lett. **72**, 3243-3296 (1994).

81. A.S. Fokas, On a Class of Physically Important Integrable Equations, Physica D **87**, 145-150 (1995).

82. A.S. Fokas, The Korteweg-deVries Equation and Beyond, Acta Applicandae Mathematicae **39**, 295-305 (1995).

83. A.S. Fokas and A.R. Its, Integrable Equations on the Half Infinite Line, Chaos Soliton Fract **5**, 2367-2376 (1995).

84. A.S. Fokas and A.R. Its, The Linearization of the Initial-Boundary Value Problem of the Nonlinear Schrödingers Equation, SIAM J. of Math. Anal. **27**, 738-764 (1996).

85. A.S. Fokas, R.H.J. Grimshaw and D.E. Pelinovsky. On the Asymptotic Integrability of a Higher-Order Evolution Equation Describing Internal Waves in a Deep Fluid, J. Maths. Phys. **37**, 3415-3421 (1996).

86. A.S. Fokas and I.M. Gelfand, Surfaces on Lie Groups, on Lie Algebras, and their Integrability, Commun. Math. Phys. **177**, 203-220 (1996).

87. Q.M. Liu and A.S. Fokas, Exact Interaction of Solitary Waves for Certain Non-Integrable Equations, J. Math. Phys. **37**, 324-345 (1996).

88. A.S. Fokas and T. Bountis, Order and the Ubiquitous Occurrence of Chaos, Physica A **228**, 236-244 (1996).

89. A.S. Fokas and Q.M. Liu, Asymptotic Integrability of Water Waves, Phys. Rev. Lett. **77**, 2347-2351 (1996).

90. A.S. Fokas, I.M. Gel'fand and Y. Kurylev, Inversion Method for Magnetoencephalography, Inverse Probl. **12**, 9-11 (1996).

91. A.S. Fokas, A Unified Transform Method for Solving Linear and Certain Nonlinear PDE's, Proc. R. Soc. Lond. A **453**, 1411-1443 (1997).

92. A.S. Fokas and Q.M. Liu, Linear Superpositions in Nonlinear Wave Equations, Methods and Applications of Analysis **4**, 156-161 (1997).

93. A.S. Fokas and B. Pelloni, The Solution of Certain IBV Problems for the Linearized KdV Equation, Proc. R. Soc. Lond. A **454**, 645-657 (1998).

94. A.S. Fokas and S. Tanveer, A Hele-Shaw Problem and the Second Painlevé Transcendent, Math. Proc. Camb. Phil. Soc. **124**, 169-191 (1998).

95. A.S. Fokas, Lax Pairs and a New Spectral Method for Linear and Integrable Nonlinear PDE's, Selecta Mathematica **4**, 31-68 (1998).

96. A.S. Fokas and L.Y. Sung, The Cauchy Problem for the Kadomtsev–Petviashvili–I Equation Without the Zero Mass Constraint, Math. Proc. Camb. Phil. Soc. **125**, 113-138 (1999).

97. A.S. Fokas and C. Menyuk, Integrability and Similarity in Transient Stimulated Raman Scattering, J. Nonlinear Sci. **9**, 1-31 (1999).

98. A.S. Fokas, L.Y. Sung and D. Tsoubelis, The Inverse Spectral Method for Colliding Gravitational Waves, Math. Phys. Anal. and Geom. **1**, 313-330 (1999).

99. J.D. Gibbon, A.S. Fokas and C.R. Doering, Dynamically Stretched Vortices as Solutions of the Navier-Stokes Equations, Physica D **132**, 497-510 (1999).

100. D. ben-Avraham and A.S. Fokas, The Solution of the Modified Helmholtz Equation in a Wedge and an Application to Diffusion-Limited Coalescence, Phys. Lett. A **263**, 355-359 (1999).

101. A.S. Fokas and L. Luo, Global Solutions and their Asymptotic Behaviour for Benjamin-Ono-Burgers Type equations, Diff. and Int. Eqs. **13**, 115-224 (2000).

102. A.S. Fokas and B. Pelloni, Integral Transforms, Spectral Representation and the d-Bar Problem, Proc. R. Soc. Lond. A **456**, 805-833 (2000).

103. Ö. Ceyhan, A.S. Fokas and M. Gürses, Deformations of Surfaces Associated with Integrable Gauss-Mainardi-Codazzi Equations, J. Math. Phys. **41**, 2251-2270 (2000).

104. A.S. Fokas and B. Pelloni, A Method of Solving Moving Boundary Value Problems for Linear Evolution Equations, Phys. Rev. Lett. **84**, 4785-4789 (2000).

105. A.S. Fokas and A.A. Kapaev, A Riemann-Hilbert Approach to the Laplace Equation, J. Math. Anal. Appl. **251**, 770-804 (2000).

106. A.S. Fokas, On the Integrability of Linear and Nonlinear PDEs, J. Math. Phys. **41**, 4188-4237 (2000).

107. A.S. Fokas and T.A. Ioannidou, The Inverse Problem for the Ward Equation and for the $2+1$ Chiral Model, Commun. in Applied Anal. **5**, 235-246 (2001).

108. A.S. Fokas, I.M. Gelfand, F. Finkel and Q. M. Liu, A Formula for Constructing Infinitely Many Surfaces on Lie Algebras and Integrable Equations, Selecta Mathematica **6**, 1-29 (2001).

109. A.S. Fokas, Two Dimensional Linear PDE's in a Convex Polygon, Proc. R. Soc. Lond. A **457**, 371-393 (2001).

110. A.S. Fokas, D.E. Pelinovski and C. Sulem, Interaction of Lumps with a Line Soliton for the DSII Equation, Physica D **152-153**, 189-198 (2001).

111. A.S. Fokas and B. Pelloni, Two-Point Boundary Value Problems for Linear Evolution Equations, Math. Proc. Camb. Phil. Soc. **131**, 521-543 (2001).

112. A.S. Fokas and B. Pelloni, Integrable Evolution Equations in Time-Dependent Domains, Inverse Probl. **17**, 919-935 (2001).

113. D. ben-Avraham and A.S. Fokas, Solution of the Modified Helmholtz Equation in a Triangular Domain and an Application to Diffusion-Limited Coalescence, Phys. Rev. E **64**, 016114 (2001).

114. A.S. Fokas and C. Rogers, Initial/Boundary Value Problems for Simultaneous Evolution Equations in Three Dimensions, Stud. Appl. Math. **107**, 391-401 (2001).

115. A.S. Fokas and M. Zyskin, The Fundamental Differential Form and Boundary Value Problems, Quart. J. Mech. Appl. Math. **55**, 457-479 (2002).

116. A.S. Fokas, Integrable Nonlinear Evolution Equations on the Half-Line, Comm. Math. Phys. **230**, 1-39 (2002).

117. A.S. Fokas, A New Transform Method for Evolution PDEs, IMA J. Appl. Math. **67**, 1-32 (2002).

118. F. Finkel and A.S. Fokas, On the Construction of Evolution Equations Admitting a Master Symmetry, Phys. Lett. A **293**, 36-44 (2002).

119. A.S. Fokas and P.F. Schultz, Long-Time Asymptotics of Moving Boundary Problems Using an Ehrenpreis-Type Representation and its Riemann-Hilbert Nonlinearization, Commun. Pur. Appl. Math. **56**, 517-548 (2003).

120. A.S. Fokas, Ehrenpreis Type Representations and their Riemann-Hilbert Nonlinearisations, J. Nonlinear Math. Phys. **10**, 47-61 (2003).

121. A.S. Fokas and A. Pogrebkov, The Inverse Spectral Method for the KPI Equation in the Background of One Line Soliton, Nonlinearity **16**, 771-783 (2003).

122. A.S. Fokas and A.A. Kapaev, On a Transform Method for the Laplace Equation in a Polygon, IMA J. Appl. Math. **68**, 355-408 (2003).

123. A.S. Fokas, Applied Mathematics and the Imaging of the Brain, Bulletin of the Greek Mathematical Society **47**, 3-18 (2003).

124. A.S. Fokas, The Davey Stewartson I Equation on the Quarter Plane with Homogeneous Dirichlet Boundary Conditions, J. Math. Phys. **44**, 3226-3244 (2003).

125. A. Boutet de Monvel, A.S. Fokas and D. Shepelsky, Analysis of the Global Relation for the Nonlinear Schrödinger Equation on the Half-Line, Lett. Math. Phys. **65**, 199-212 (2003).

126. A. Boutet de Monvel, A.S. Fokas and D. Shepelsky, The Modified KdV Equation on the Half-Line, J. Inst. Math. Jussieu **3**, 139-164 (2004).

127. A.S. Fokas and V. Marinakis, Reconstruction Algorithm for the Brain Imaging Techniques of PET and SPECT, Hermis Intern. Journal **4**, 45-61 (2004).

128. A.S. Fokas, Boundary-Value Problems for Linear PDEs with Variable Coefficients, Proc. R. Soc. London A **460**, 1131-1151 (2004).

129. D. Crowdy and A.S. Fokas, Explicit Integral Solutions for the Plane Elastostatic Semi-Strip, Proc. R. Soc. London A **460**, 1285-1309 (2004).

130. A.S. Fokas and S. Kamvissis, Zero Dispersion Limit for Integrable Equations on the Half-Line with Linearisable Data, Abstr. Appl. Anal. **5**, 361-370 (2004).

131. S. Fulton, A.S. Fokas and C. Xenophontos, An Analytical Method for Linear Elliptic PDEs and its Numerical Implementation, J. Comput. Appl. Math. **167**, 465-483 (2004).

132. A.S. Fokas and A.R. Its, The Nonlinear Schrödinger Equation on the Interval, J. Phys. A-Math. Gen. **37**, 6091-6114 (2004).

133. A.S. Fokas, Y. Kurylev and V. Marinakis, The Unique Determination of the Neuronal Current in the Brain via Magnetoencephalography, Inverse Probl. **20**, 1067-1082 (2004).

134. A.S. Fokas, Linearizable Initial-Boundary Value Problems for the Sine-Gordon Equation on the Half-Line, Nonlinearity **17**, 1521-1534 (2004).

135. P.A. Treharne and A.S. Fokas, Boundary Value Problems for Systems of Evolution Equations, IMA J. Appl. Math. **69**, 539 - 555 (2004).

136. A.S. Fokas, I.M. Gelfand and A.E. Kister, Prediction of the Structural Motifs of Sandwich Proteins, Proc. Natl. Acad. Sci. USA **101**, 16780-16783 (2004).

137. Y.A. Antipov and A.S. Fokas, The Modified Helmholtz Equation in a Semi-Strip, Math. Proc. Camb. Phil. Soc. **138**, 339-365 (2005).

138. A.S. Fokas and B. Pelloni, Boundary Value Problems for Boussinesq Type Systems, Math. Phys. Anal. Geom. **8**, 59-96 (2005).

139. A.S. Fokas and L.Y. Sung, Generalised Fourier Transforms, their Nonlinearisation and the Imaging of the Brain, Notices Amer. Math. Soc. **52**, 1176-1190 (2005).

140. A.S. Fokas, C. Rogers and W. Schief, Evolution of Methacrylate Distribution During Wood Saturation, Appl. Math. Lett. **18**, 321-328 (2005).

141. A.S. Fokas and D.T. Papageorgiou, Absolute and Convective Instability for Evolution PDEs on the Half-Line, Stud. Appl. Math. **114**, 95-114 (2005).

142. M. McConnell, B. Pelloni and A.S. Fokas, Localised Coherent Structures of the DSI and DSII Equations - A Numerical Study, Math. Comput. Simulat. **69**, 424-438 (2005).

143. A.S. Fokas and B. Pelloni, A Transform Method for Evolution PDEs on the Interval, IMA J. Appl. Maths **75**, 564-587 (2005).

144. A.S. Fokas, A Generalised Dirichlet to Neumann Map for Certain Nonlinear Evolution PDEs, Comm. Pure Appl. Math. **LVIII**, 639-670 (2005).

145. G.Dassios and A.S. Fokas, The Basic Elliptic Equations in an Equilateral Triangle, Proc. R.Soc. Lond. A **461**, 2721-2748 (2005).

146. G. Dassios, A.S. Fokas and F. Kariotou, On the Non-Uniqueness of the Inverse Magnetoencephalography Problem, Inverse Probl. **21**, L1-L5 (2005).

147. A.S Fokas, T. Papatheodorou, I.M. Gelfand and A.E. Kister, A Geometric Construction Determines Permissible Strand Arrangements of Sandwich Proteins, Proc. Nat. Acad. Sci. USA **102**, 15851-15853 (2005).

148. A.S. Fokas, A. R. Its and L. Y. Sung, The Nonlinear Schrödinger Equation on the Half-Line, Nonlinearity **18**, 1771-1822 (2005).

149. A.S. Fokas and J.T. Stuart, The Time Periodic Solution of the Burgers Equation on the Half-Line and an Application to Steady Streaming, J. Nonlin. Math. Phys. **12**, 302-314 (2005).

150. A.S. Fokas, A. Iserles and V. Marinakis, Reconstruction Algorithm for Single Photon Emission Computed Tomography and its Numerical Implementation, J. R. Soc. Interface **3**, 45-54 (2006).

151. A.S. Fokas, and V. Marinakis, The Mathematics of the Imaging Techniques of MEG, CT, PET and SPECT, Int. J. Bifurcat. Chaos **16**, 1671-1687 (2006).

152. A. Boutet de Monvel, A.S. Fokas and D. Shepelsky, Integrable Nonlinear Evolution Equations on a Finite Interval, Comm. Math. Phys. **263**, 133-172 (2006).

153. M. J. Ablowitz, A. S. Fokas and Z. H. Musslimani, On a New Non-Local Formulation of Water Waves, J Fluid. Mech. **562**, 313-343 (2006).

154. A.S. Fokas and D.A. Pinotsis, The Dbar Formalism for Certain Linear Non-Homogeneous Elliptic PDEs in two Dimensions, Eur. J. Appl. Math. **17**, 323-346 (2006).

155. A.E. Kister, A.S. Fokas, T.S. Papatheodorou and I.M. Gelfand, Strict Rules Determine the Arrangement of Strands in Sandwich Proteins, Proc. Nat. Acad. Sci. USA **103**, 4107-4110 (2006).

156. A. S. Fokas, Integrable Nonlinear Evolution PDEs in 4+2 and 3+1 Dimensions, Phys. Rev. Lett. **96**, 190201 (2006).

157. P.A. Treharne and A.S. Fokas, Initial-Boundary Value Problems for Linear PDEs with Variable Coefficients, Camb. Phil. Soc. **143**, 221-242 (2007).

158. A.S. Fokas and D.A. Pinotsis, Quaternions, Evaluation of Integrals and Boundary Value Problems, Comp. Meth. Funct. Th. **7**, 443-476 (2007).

159. A.S. Fokas and B. Pelloni, The Generalised Dirichlet to Neumann Map for Moving Initial-Boundary Value Problems, J. Math. Phys. **48**, 013502 (2007).

160. D. Crowdy and A.S. Fokas, Conformal Mappings to a Doubly Connected Polycircular Arc Domains, P. R. Soc. A. **463**, 1885-1907 (2007).

161. S. De Lillo and A.S. Fokas, The Dirichlet to Neumann Map for the Heat Equation on a Moving Boundary, Inverse Probl. **23**, 1699-1710 (2007).

162. A.S. Fokas, Nonlinear Fourier Transforms, Integrability and Nonlocality in Multidimensions, Nonlinearity **20**, 2093-2113 (2007).

163. G.Dassios, A.S. Fokas and D.Hadjiloizi On the complementarity of Electroencephalography and Magnetoencephalography, Inverse Probl. **23**, 2541-2549 (2007).

164. A.G. Sifalakis, A.S. Fokas, S. Fulton and Y.G. Saridakis, The Generalised Dirichlet to Neumann Map for Linear Elliptic PDEs and its Numerical Implementation, J. Comput. Appl. Math. **219**, 9-34 (2008).

165. N. Flyer and A.S. Fokas, A Hybrid Analytical Numerical Method for Solving Evolution Partial Differential Equations. I. The Half-Line, P. R. Soc. A. **464**, 1823-1849 (2008).

166. G.Dassios and A.S. Fokas, Methods for Solving Elliptic PDEs in Spherical Coordinates, SIAM J. Appl. Math. **68**, 1080-1096 (2008).

167. P.A. Treharne and A.S. Fokas, The Generalized Dirichlet to Neumann Map for the KdV Equation on the Half-Line, J. Nonlinear Sci. **18**, 191-217 (2008).

168. A.S. Fokas and L. Luo, On the Asymptotic Linearization of Acoustic Waves, Trans. Amer. Math. Soc. **360**, 6403-6445 (2008).

169. J.L. Bona and A.S. Fokas, Initial-Boundary-Value Problems for Linear and Integrable Nonlinear Dispersive Partial Differential Equations, Nonlinearity **21**, T195-T203 (2008).

170. V. Michel and A.S. Fokas, A Unified Approach to Various Techniques for the Non-Uniqueness of the Inverse Gravimetric Problem and Wavelet Based Methods, Inverse Probl. **24**, 1-23 (2008).

171. T.S. Papatheodorou and A.S. Fokas, Systematic Construction and Prediction of the Arrangement of the Strands of Sandwich Proteins, J. R. Soc. Interface **6**, 63-73 (2008).

172. A.S. Fokas, Soliton Multidimensional Equations and Integrable Evolutions Preserving Laplace's Equation, Phys. Lett. A **372**, 1277-1279 (2008).

173. A.S. Fokas, The D-Bar Method, Inversion of Certain Integrals and Integrability in 4 + 2 and 3 + 1 Dimensions, J. Phys. A **41**, 1-16 (2008).

174. J. Lenells and A.S. Fokas, On a Novel Integrable Generalization of the nonlinear Schrodinger Equation, Nonlinearity **22**, 11-27 (2008).

175. A.S. Fokas, N. Flyer, S.A. Smitheman and E.A. Spence, A Semi-Analytical Numerical Method for Solving Evolution and Elliptic Partial Differential Equations, J. Comp. Appl. Math. **227**, 59-74 (2009).

176. A.S. Fokas, Electro-Magneto-Encephalography for the Three-Shell Model: Distributed Current in Arbitrary, Spherical and Ellipsoidal Geometries, J. R. Soc. Interface **6**, 479-488 (2009).

177. G. Dassios and A.S. Fokas, Electro-Magneto-Encephalography for the 3-Shell Model: Dipoles and Beyond for Spherical Geometry, Inverse Probl. **25**, 1-20 (2009).

178. A.S. Fokas, The Davey-Stewartson on the Half-Plane, Comm. Math. Phys. **289**, 957-993 (2009).

179. A.S. Fokas, The Kadomtsev-Petviashvili Equation Revisited and Integrability in 4+2 and 3+1, Stud. Appl. Math. **122**, 347-359 (2009).

180. A.S. Fokas, Lax Pairs: A Novel Type of Separability (invited paper for the special volume of the 25th anniversary of Inverse Problems), Inverse Probl. **25**, 1-44 (2009).

181. G.Dassios and A.S. Fokas, Electro-Magneto-Encephalography and Fundamental Solutions, Q. J. Appl. Math. **67**, 771-780 (2009).

182. G. Dassios and A.S. Fokas, On Two Useful Identities in the Theory of Ellipsoidal Harmonics, Stud. Appl. Math. **123**, 361-373 (2009).

183. A.C.L Ashton and A.S Fokas, A Novel Method of Solution for the Fluid Loaded Plate, P. R. Soc. A. **465**, 3667-3685 (2009).

184. J. Lenells and A.S. Fokas, An Integrable Generalization of the Nonlinear Schrodinger Equation on the Half-Line and Solitons, Inverse Probl. **25**, 115006 (2009).

185. A.S. Fokas and J. Lenells, Explicit Soliton Asymptotics for the Korteweg-de-Vries Equation on the Half-Line, Nonlinearity **23**, 937-976 (2010).

186. J. Lenells and A.S. Fokas, On a Novel Integrable Generalization of the Sine-Gordon Equation, J. Math. Phys. **51**, 023519 (2010).

187. K. Kalimeris and A.S. Fokas, The Heat Equation in the Interior of an Equilateral Triangle, Stud. Appl. Math. **124**, 283-305 (2010).

188. E.A. Spence and A.S. Fokas, A New Transform Method I: Domain Dependent Fundamental Solutions and Integral Representations, P. R. Soc. A. **466**, 2259-2281 (2010).

189. E.A. Spence and A.S. Fokas, A New Transform Method II: the Global Relation, and Boundary Value Problems in Polar Co-ordinates, P. R. Soc. A. **466**, 2283-2307 (2010).

190. A. Charalambopoulos, G. Dassios and A.S. Fokas, Laplace's equation in the exterior of a convex polygon: the equilateral triangle, Quart. Appl. Math. **68**, 645-660 (2010).

191. S.A. Smitheman, E.A. Spence and A.S. Fokas, A Spectral Collocation Method for the Laplace and Modified Helmholtz Equations in a Convex Polygon, IMA J. Num. Anal. **30**, 1184-1205 (2010).

192. J. Lenells and A.S. Fokas, Boundary Value Problems for the Stationary Axisymmetric Einstein Equations: A Rotating Disk, Nonlinearity **24**, 177-206 (2011).

193. D. Mantzavinos and A.S. Fokas, The KPII Equation on the Half-Plane, Physica D **240**, 477-511 (2011).

194. A.S. Fokas and A. Himonas, Well-Posedness of an Integrable Generalization of the Nonlinear Schrodinger Equation on the Circle, Lett. Math. Phys. **96**, 169-189 (2011).

195. D.G. Crowdy, A.S. Fokas and C.C. Green, Conformal Mappings to Multiply Connected Polycircular Arc Domains, Comp. Meth. Funct. Theory **11**, 685-706 (2011).

196. A.C.L Ashton and A.S Fokas, A Non-Local Formulation for Rotational Water Waves, J. Fluid. Mechanics **689**, 129-148 (2011).

197. A.S. Fokas and E.A. Spence, Synthesis as Opposed to Separation of Variables, SIAM Rev. **54**, 291-324 (2012).

198. A.S. Fokas and D. Yang, On a Novel Class of Integrable ODEs Related to the Painleve Equations. Int. J. Bifurcat. Chaos **22**, 1250211 (2012).

199. P. Guhaa, A.G. Choudhuryb and A.S. Fokas, Hamiltonians and Conjugate Hamiltonians of Some Fourth-Order Nonlinear ODEs, Nonlinear Anal.-Theor. **75**, 2126-2138 (2012).

200. G. Dassios and A.S. Fokas, Electro-Magneto-Encephalography for the Three-Shell Model: A Single Dipole in Ellipsoidal Geometry, Math. Method Appl. Sci. **35**, 1415-1422 (2012).

201. A.S. Fokas, O. Hauk and V. Michel, Electro-Magneto-Encephalography for the Three-Shell Model: Numerical Implementation for Distributed Current in Spherical Geometry, Inverse Probl. **28**, 035009 (2012).

202. A.S. Fokas and Y. Kurylev, Electro-Magneto-Encephalography for the Three-Shell Model: Minimal L_2-Norm in Spherical Geometry, Inverse Probl. **28**, 035010 (2012).

203. A.S. Fokas and A. Nachbin, Water Waves over a Variable Bottom: A Non-Local Formulation and Conformal Mapping, J. Fluid. Mechanics **695**, 288-309 (2012).

204. A.S. Fokas and J. Lenells, The Unified Method: I Non-Linearizable Problems on the Half-Line, J. Phys. A **45**, 195201 (2012).

205. A.S. Fokas and J. Lenells, The Unified Method: II NLS on the Half-Line with t-Periodic Boundary Conditions, J. Phys. A **45**, 195202 (2012).

206. A.S. Fokas and J. Lenells, The Unified Method: III Non-Linearizable Problems on the Interval, J. Phys. A **45**, 195203 (2012).

207. A.S. Fokas and B. Pelloni, The Dirichlet-to-Neumann Map for the Elliptic Sine-Gordon Equation, Nonlinearity **25**, 1011-1031 (2012).

208. A.S. Fokas and B. Pelloni, Generalized Dirichlet-to-Neumann Map in Time-Dependent Domains, Stud. Appl. Math. **129**, 51-90 (2012).

209. G. Hwang and A.S. Fokas, The Modified Korteweg-de Vries Equation on the Half-Line with a Sine-Wave as Dirichlet Datum, J. Nonlinear Sci. **20**, 135-157 (2013).

210. A.S. Fokas, J. Lenells and B. Pelloni, Boundary Value Problems for the Elliptic Sine-Gordon Equation in a Semi-Strip, J. Nonlinear Sci. **23**, 241-282 (2013).

211. J.S. He, H.R. Zhang, L.H. Wang, K. Porsezian and A.S. Fokas, A Generating Mechanism for Higher Order Rogue Waves, Phys. Rev. E **87**, 052914 (2013).

212. G. Dassios and A.S. Fokas, The Definite Non-Uniqueness Results for Deterministic EEG and MEG Data, Inverse Probl. **29**, 065012 (2013).

213. M. Dimakos and A.S. Fokas, Davey-Stewartson Type Equations in 4+2 and 3+1 Possessing Soliton Solutions, J. Math. Phys. **54**, 081504 (2013).

214. A.S. Fokas and M.L. Glasser, The Laplace Equation in the Exterior of the Hankel Contour and Novel Identities for Hypergeometric Functions, Proc. R. Soc. Lond. A **469**, 20130081 (2013).

215. J.S. He, Y. Tao, K. Porsezian and A.S. Fokas, Rogue Wave Management in an Inhomogeneous Nonlinear Fibre with Higher Order Effects, J. Nonlinear Math. Phys. **20**, 407-419 (2013).

216. D. Mantzavinos and A.S. Fokas, The Unified Method for the Heat Equation: I. Non-Separable Boundary Conditions and Non-Local constraints in One Dimension, Eur. J. Appl. Math. **24**, 857-886 (2013).

217. A.S. Fokas and K. Kalimeris, Eigenvalues for the Laplace Operator in the Interior of an Equilateral Triangle, Comput. Methods and Funct. Theory **14**, 1-33 (2014).

218. A.S. Fokas and S. De Lillo, The Unified Transform for Linear, Linearizable and Integrable Nonlinear PDEs, Physica Scripta **89**, 038004 (2014) .

219. G.A. Kastis, D. Kyriakopoulou, A. Gaitanis, Y. Fernandez, B.F. Hutton and A.S. Fokas, Evaluation of the Spline Reconstruction Technique for PET, Med. Phys. **41**, 042501 (2014).

220. C.G. Vayenas, S. Souentie and A.S Fokas, A Bohr-Type Model of a Composite Particle Using Gravity as the Attractive Force, Physica A **405**, 360-379 (2014).

221. M. Dimakos and A.S. Fokas, Linearizable Nonlinear PDEs in Multidimensions, J. Math. Phys. **56**, 013511 (2015).

222. M. Dimakos and A.S. Fokas, The Poisson and the Biharmonic Equations in the Interior of a Convex Polygon, Stud. Appl. Math. **134**, 456-498 (2015).

223. D. Mantzavinos and A.S. Fokas, The Unified Transform for the Heat Equation: II. Non-Separable Boundary Conditions in Two Dimensions, Eur. J. Appl. Math. **26**, 887-916 (2015).

224. P.Hashemzadeh, A.S Fokas and S.A. Smitheman, A Numerical Technique for Linear Elliptic Partial Differential Equations in Polygonal Domains, Proc. R. Soc. A **471**, 20140747 (2015).

225. A.C.L Ashton and A.S Fokas, Elliptic Equations with Low Regularity Boundary Data via the Unified method, Complex Var. Elliptic **60**, 596-619 (2015).

226. G. Dassios and A.S. Fokas, Characterization of an Acoustic Spherical Cloak, Inverse Probl. **31**, 035001 (2015).

227. G.A. Kastis, A. Gaitanis, A. Samartzis and A.S. Fokas, The SRT Reconstruction Algorithm for Semiquantification in PET Imaging, Med. Phys. **42**, 5970-5982 (2015).

228. J. Lenells and A. S. Fokas. The Nonlinear Schrödinger Equation with t-Periodic Data: I. Exact Results, Proc. R. Soc. A **471**, 20140925 (2015).

229. J. Lenells and A. S. Fokas, The Nonlinear Schrödinger Equation with t-Periodic Data: II. Perturbative Results, Proc. R. Soc. A **471**, 20140926 (2015).

230. A.S Fokas, A. A. Himonas and D. Mantzavinos, The Korteweg-de Vries Equation on the Half-Line, Nonlinearity **29**, 489-527 (2016).

231. A.S Fokas, Integrable Multidimensional Versions of the Nonlocal Nonlinear Schrödinger Equation, Nonlinearity **29**, 319-324 (2016).

232. C.G. Vayenas, A.S Fokas and D. Grigoriou, On the Structure, Masses and Thermodynamics of the $W^{\pm}$ Bosons, Physica A **450**, 37-48 (2016).

233. A.S. Fokas and D.A. Smith, Evolution PDEs and Augmented Eigenfunctions. Finite interval, Adv. Differential Equ. **21**, 735-766 (2016).

234. A.S. Fokas and C.G. Vayenas, On the Structure, Masses and Thermodynamics of the Z Boson, Physica A **464**, 231-240 (2016).

235. C.G. Antonopoulos, A.S. Fokas and T.C. Bountis, Dynamical Complexity in C.elegans Neural Network, Phys. J. Spec. Top. **225**, 1255-1269 (2016).

236. Y. Liu, A.S. Fokas, D. Mihalache and J. He, Parallel Line Rogue Waves of the Third-Type Davey-Stewartson Equation, Rom. Rep. Phys. **68**, 1425-1446 (2016).

237. A.S. Fokas, A.A. Himonas and D. Mantzavinos, The Nonlinear Schrödinger Equation on the Half-Line, Trans. Amer. Math. Soc. **369**, 681-709 (2017).

238. T.C. Bountis, A.S. Fokas and E. Z. Psarakis, Fractal Analysis of Tree Paintings by Piet Mondrian, International Journal of Arts and Technology **10**, 27-42 (2017).

239. C.G. Vayenas, A.S. Fokas and D. Grigoriou, Catalysis and autocatalysis of chemical synthesis and of hadronization, Appl. Catal. B **203**, 582-590 (2017).

240. I. Hitzazis and A.S. Fokas, Linear Elliptic PDEs in a Cylindrical Domain with a Polygonal Cross-Section, Stud. Appl. Math. **139**, 288-321 (2017).

241. A.S. Fokas and K. Kalimeris, Water Waves with Moving Boundaries, J. Fluid Mech. **832**, 641-665 (2017).

242. A. Fernandez, E.A. Spence and A.S. Fokas, Uniform Asymptotics as a Stationary Point Approaches an Endpoint, IMA J. Appl. Math. **83**, 204-242 (2018).

243. B. Xia and A.S. Fokas, Initial-Boundary Value Problems Associated with the Ablowitz-Ladik System, Physica D **364**, 27-61 (2018).

244. A.S. Fokas, C.G. Vayenas and D.P. Grigoriou, On the Mass and Thermodynamics of the Higgs Boson, Physica A **492**, 737-746 (2018).

245. A.S. Fokas and Z. Wang, Generalised Dirichlet to Neumann Maps for Linear Dispersive Equations on Half-Line, Math. Proc. Cambridge **164**, 297-324 (2018).

246. M. Colbrook and A.S. Fokas, Computing Eigenvalues and Eigenfunctions of the Laplacian for Convex Polygons, Appl. Numer. Math. **126**, 1-17 (2018).

247. J. Rao, Y. Zhang, A.S. Fokas and J. He, Rogue Waves of the Nonlocal Davey-Stewartson I Equation, Nonlinearity **31**, 4090-4107 (2018).

248. G. Dassios, A.S. Fokas, P. Hashemzadeh and R.M. Leahy, EEG for Current with Two-Dimensional Support, IEEE T. Bio-Med. Eng. **65**, 2101-2108 (2018).

249. A.S. Fokas and M.C. Van der Weele, Complexification and Integrability in Multidimensions, J. Math. Phys. **59**, 091413 (2018).

250. A. Fernandez and A.S. Fokas, Asymptotics to All Orders of the Hurwitz Zeta Function, J. Math. Anal. Appl. **465**, 423-458 (2018).

251. A. Fernandez, D. Baleanu and A.S. Fokas, Solving PDEs of Fractional Order Using the Unified Transform Method, Appl. Math. Comput. **339**, 738-749 (2018).

252. L. Blanchet and A.S. Fokas, Equations of Motion of Self-Gravitating N-Body Systems in the First Post-Minkowskian Approximation, Phys. Rev. D **98**, 084005 (2018).

253. N.E. Protonotarios, A.S. Fokas, K. Kostarelos and G.A. Kastis, The Attenuated Spline Reconstruction Technique for Single Photon Emission Computed Tomography, J. R. Soc. Interface **15**, 20180509 (2018).

254. E-N.G. Grylonakis, C.K. Filelis-Papadopoulos, G.A. Gravvanis and A. S. Fokas, An Adaptive Complex Collocation Method For Solving Linear Elliptic PDEs in Regular Convex Polygons Based on the Unified Transform, Numer. Math. Theor. Meth. Appl. **12**, 348-369 (2019).

255. M.J. Colbrook, A.S. Fokas and P. Hashemzadeh, A Hybrid Analytical-Numerical Technique for Elliptic PDEs, SIAM J. Comput. **41**, A1066-A1090 (2019).

256. M. Colbrook, L.J. Ayton and A.S. Fokas, The Unified Transform for Mixed Boundary Condition Problems in Unbounded Domains, P. Roy. Soc. Lond. A Mat. **475**, 20180605 (2019).

257. P. Hashemzadeh and A.S. Fokas, Helmholtz Decomposition of the Neuronal Current for the Ellipsoidal Head Model, Inverse Probl. **35**, 025002 (2019).

258. A.S. Fokas, Ultra-Relativistic Gravity has Properties Associated with the Strong Force, Eur. Phys. J. C **79**, 271 (2019).

259. E-N.G. Grylonakis, C.K. Filelis-Papadopoulos, G.A. Gravvanis and A.S. Fokas, An Iterative Spatial-Stepping Numerical Method for Linear Elliptic PDEs Using the Unified Transform, J. Comput. Appl. Math. **352**, 194-209 (2019).

260. A.C.L. Ashton and A.S. Fokas, Relations among the Riemann Zeta and Hurwitz Zeta Functions, as Well as Their Products, Symmetry **11**, 754 (2019).

261. K. Kalimeris and A.S. Fokas, A Novel Integral Equation for the Riemann Zeta Function and Large t-Asymptotics, Mathematics **7**, 650 (2019).

262. E.N.G. Grylonakis, G.A. Gravvanis, C.K. Filelis-Papadopoulos and A.S. Fokas, A Parallel Unified Transform Solver Based on Domain Decomposition for Solving Linear Elliptic PDEs, J. Supercomput. **75**, 4947-4985 (2019).

263. A.S. Fokas, A Novel Approach to the Lindelöf Hypothesis, Transactions of Mathematics and its Applications, **3**, 1-49 (2019).

264. F.P.J. de Barros, M.J. Colbrook and A.S. Fokas, A Hybrid Analytical-Numerical Method for Solving Advection-Dispersion Problems on a Half-Line, Int. J. Heat Mass Tran. **139**, 482-491 (2019).

265. A.S. Fokas and T. Ozsari, New Rigorous Developments Regarding the Fokas Method and an Open Problem, in Solved and Unsolved Problems, M.T. Rassias, ed., EMS Newsletter **113**, 60-61 (2019).

266. A.S. Fokas, B. Pelloni and B. Xia, Evolution Equations on Time-Dependent Intervals, IMA J. Appl. Math. **84**, 1044-1060 (2019).

267. K. Kalimeris and A.S. Fokas, Explicit Asymptotics for Certain Single and Double Exponential Sums, P. Roy. Soc. Edinb. A **150**, 607-632 (2019).

268. S. Leweke, V. Michel and A.S. Fokas, Electro-Magnetoencephalography for the Spherical Multiple-Shell Model: Novel Integral Operators with Singular-Value Decompositions, Inverse Probl. **36**, 035003 (2020).

269. P. Hashemzadeh, A.S. Fokas and C.-B. Schonlieb, A Hybrid Analytical-Numerical Algorithm for Determining the Neuronal Current via Electroencephalography, J. R. Soc. Interface **17**, 20190831 (2020).

270. J. Lenells and A.S. Fokas, Linearizable Boundary Value Problems for the Elliptic Sine-Gordon and the Elliptic Ernst Equations, J. Nonlinear Math. Phy. **27**, 337-356 (2020).

271. A. Batal, A.S. Fokas and T. Ozsari, Fokas Method for Linear Boundary Value Problems Involving Mixed Spatial Derivatives: BVPs with Mixed Spatial Derivatives, Proc. R. Soc. A **476**, 20200076 (2020).

272. A.S. Fokas, N. Dikaios and G.A. Kastis, Mathematical Models and Deep Learning for Predicting the Number of Individuals Reported to be Infected with SARS-CoV-2, J R Soc Interface **17**, 20200494 (2020).

273. K. Kalimeris and A.S. Fokas, The Modified Helmholtz Equation on a Regular Hexagon-The Symmetric Dirichlet Problem, Axioms **9**, 89 (2020).

274. A.S. Fokas, J. Cuevas-Maraver and P.G. Kevrekidis, A Quantitative Framework for Exploring Exit Strategies from the COVID-19 Lockdown, Chaos Soliton Fract **140**, 110244 (2020).

275. A.S. Fokas and J. Lenells, A New Approach to Integrable Evolution Equations on the Circle, Proc. R. Soc. A **477**, 20200605 (2021).

276. M.C. van der Weele and A.S. Fokas, Solving the Initial Value Problem for the 3-Wave Interaction Equations in Multidimensions, Comp. Meth. Funct. Theory **21**, 9-39 (2021).

277. B. Deconinck, A.S. Fokas and J. Lenells, The Implementation of the Unified Transform to the Nonlinear Schrödinger Equation with Periodic Initial Conditions, Lett. Math. Phys. **111**, 17 (2021).

278. A.S. Fokas and G.A. Kastis, SARS-COV-2: The Second Wave in Europe, J. Med. Internet Res. **23**, e22431 (2021).

279. A.S. Fokas, N. Dikaios and G.A. Kastis, Covid-19: Predictive Mathematical Formulae for the Number of Deaths During Lockdown and Possible Scenarios for the Post-Lockdown Period, Proc. R. Soc. A **477**, 20200745 (2021).

280. N. Dikaios, N. Protonotarios, A.S. Fokas and G.A. Kastis, Quantification of T1, T2 Relaxation Times from Magnetic Resonance Fingerprinting Radially Undersampled Data Using Analytical Transformations, Magn. Rson Imaging **80**, 81-89 (2021).

281. J. Rao, A.S. Fokas and J. He, Doubly Localized Two-Dimensional Rogue Waves in the Davey-Stewartson I Equation, J. Nonlinear Sci. **31**, 67 (2021).

282. A.S. Fokas and M.C. van der Weele, The Unified Transform for Time-Periodic Boundary Conditions, Stud. Appl. Math. **147**, 1339-1368 (2021).

283. A.S. Fokas, J. Cuevas-Maraver and P.G. Kevrekidis, Easing COVID-19 Lockdown Measures While Protecting the Older Restricts the Deaths to the Level of the Full Lockdown, Sci. Rep. **11**, 5839 (2021).

284. A.S. Fokas and J. Lenells, On the Asymptotics to All Orders of the Riemann Zeta Function and of a Two-Parameter Generalization of the Riemann Zeta Function, Mem. Amer. Math. Soc. **275**, 1351 (2022).

285. A.S. Fokas, B. Pelloni and D.A. Smith, Time-Periodic Linear Boundary Value Problems on a Finite Interval, Q. Appl. Math. **80**,481-506 (2022).

286. A. Vrachliotis, G.A. Kastis, N.E. Protonotarios, A.S. Fokas, S.G. Nekolla, C.D. Anagnostopoulos, L. Costaridou and A. Gaitanis, Evaluation of the Spline Reconstruction Technique for Preclinical PET Imaging, Comput. Methods Programs Biomed. **217**, 106668 (2022).

287. N.E. Protonotarios, A.S. Fokas, A. Vrachliotis, V. Marinakis, N. Dikaios and G.A. Kastis, Reconstruction of Preclinical PET Images via Chebyshev Polynomial Approximation of the Sinogram, Appl. Sci. **12**, 3335 (2022).

288. A.S. Fokas, N. Dikaios, S. Tsiodras and G.A. Kastis, Simple Formulae, Deep Learning and Elaborate Modelling for the Covid-19 Pandemic, Encyclopedia **2**, 679-689 (2022).

289. A.S. Fokas, Integrable Nonlinear Evolution Equations in Three Spatial Dimensions, Proc. R. Soc. A **478**, 20220074 (2022).

290. A.S. Fokas, Y. Cao and J. He, Multi-Solitons, Multi-Breathers and Multi-Rational Solutions of Integrable Extensions of the Kadomtsev-Petviashvili Equation in Three Dimensions, Fractal Fract. **6**, 425 (2022).

291. A.S. Fokas, An Extension of Integrable Equations, Phys. Lett. A **447**, 128290 (2022).

292. C. Papageorgiou, A.E. Giannopoulos, A.S. Fokas, P.M. Thompson, N.C. Kapsalis, P. Papageorgiou, X. Stachtea and C.N. Capsalis, Time Perception Through the Processing of Verb Tenses: An ERP Study Regarding Mental Time Travel, Arch. Clin. Biomed. Res. **5**, 835-855 (2022).

293. A.S. Fokas and A. Latifi, The Nonlinear Schrödinger Equation with Forcing Involving Products of Eigenfunctions, Open Communications in Nonlinear Mathematical Physics **2** (2022).

294. M. Luhar, A.A. Oberai, A.S. Fokas and Y.C. Yortsos, Accounting for Super-Spreader Events and Algebraic Decay in SIR Models, Comput. Method Appl. M. **401**, 115286 (2022).

295. A.S. Fokas and K. Kalimeris, Extensions of the d'Alembert Formulae to the Half Line and the Finite Interval Obtained via the Unified Transform, IMA J. Appl. Math., hxac030 (2022).

296. N.E. Protonotarios, A.S. Fokas, G.A. Kastis and N. Dikaios, Sigmoid and Beyond: Algebraic Activation Functions for Artificial Neural Networks Based on Solutions of a Riccati Equation, IEEE IT Prof. **24**, 30-36 (2022).

297. A.S. Fokas, N. Dikaios and Y.C. Yortsos, An Algebraic Formula, Deep Learning and a Novel SEIR-Type Model for the COVID-19 Pandemic, R. Soc. Open Sci. **10**, 230858 (2023).

298. P. Kalamvokas, V.G. Papageorgiou, A.S. Fokas, L.Y. Sung, A Semi-Periodic Initial-Value Problem for the Kadomtsev-Petviashvili II Equation, Nonlinearity **36**, 5422 (2023).

299. V. Marinakis, A.S. Fokas, G.A. Kastis, and N.E. Protonotarios, Chebyshev Interpolation Using Almost Equally Spaced Points and Applications in Emission Tomography, Mathematics, **11**, 4757 (2023).

300. A.S. Fokas, Can Artificial Intelligence Reach Human Thought?, PNAS nexus **2**, pgad409 (2023).

301. A. Chatziafratis, A.S. Fokas and E.C. Aifantis, On Barenblatt's Pseudoparabolic Equation with Forcing on the Half-Line via the Fokas Method, ZAMM-Z. Angew. Math. Me., **104**, e202300614 (2024).

302. A. Chatziafratis, E.C. Aifantis, A. Carbery and A.S. Fokas, Integral Representations for the Double-Diffusivity System on the Half-Line, Z. Angew. Math. Phys., **75**, 54 (2024).

303. A.S. Fokas and K. Kalimeris, The Saffman–Taylor Problem and Several Sets of Remarkable Integral Identities, Stud. Appl. Math., e12734 (2024).

PUBLICATIONS – Contributions to Encyclopedias, Symposia and Complied Volumes (refereed)

(a) **Encyclopedias**

P1. A.S. Fokas, Solitons, Encyclopedia of Physical Science and Technology, Academic Press (2001).

P2. A.S. Fokas, Integrable Systems and the Inverse Scattering Method, Encyclopedia of Mathematical Physics, Elsevier (2006) .

P3. A.S. Fokas, Riemann-Hilbert Methods, Encyclopedia of Applied and Computational Mathematics (2012).

(b) **Invited Review Articles**

P4. A.S. Fokas and M.J. Ablowitz, Inverse Scattering Transform for Multidimensional $(2+1)$ Problems, in "Nonlinear Phenomena, Lect. Notes in Physics", **189**, ed. B. Wolf, Springer-Verlag (1983).

P5. A.S. Fokas, Some Remarks on Integrability, Nonlinear Science Today, **1**, No. 3, 6-11 (1991).

P6. A.S. Fokas, Integrable Nonlinear Equations, in "Nonlinear Equations in the Applied Sciences", ed. W.F. Ames and Rogers, Academic Press (1992).

P7. A.S. Fokas and I.M. Gel'fand, Bi-Hamiltonian Structures and Integrability, in "Important Developments in Soliton Theory", ed. A.S. Fokas and V.E. Zakharov, Springer-Verlag (1993).

P8. A.S. Fokas and A.R. Its, The Isomonodromy Method and the Painlevé Equations, in "Important Developments in Soliton Theory", ed. A.S. Fokas and V.E. Zakharov, Springer-Verlag (1993).

P9. R.R. Coifman and A.S. Fokas, Inverse Spectral Method on the Plane, in "Important Developments in Soliton Theory", ed. A.S. Fokas and V.E. Zakharov, Springer-Verlag (1993).

P10. A.S. Fokas, P.J. Olver and P. Rosenau, A Plethora of Integrable Bi-Hamiltonian Equations, in "Algebraic Aspects of Integrable Systems", ed. A.S. Fokas and I.M. Gel'fand, Birkhauser (1996).

P11. A.S. Fokas, Integrability: from d'Alembert to Lax, in "Recent Advances in PDE's and Applications (in honour of P. Lax and L. Nirenberg)", AMA, R. Spigler and S. Venakidis, eds, **54** (1998).

P12. A.S. Fokas, The Dbar Method: a Tool for Solving Two-Dimensional Integrable Evolution PDEs, in "Classical and Quantum Nonlinear Integrable Systems", ed. A. Kundu, CRC Press (2003).

P13. A.S. Fokas, Differential Forms, Spectral Theory and Boundary Value Problems, in "The Legacy of Inverse Scattering Transform in Contemporary Mathematics", AMS (2003).

P14. A.S. Fokas, From Green to Lax via Fourier, Proceedings of Symposia in Applied Mathematics **65** (2007).

P15. A.S. Fokas, Nonlinear Fourier Transforms and Integrability in Multidimensions, in "Integrable Systems, Random Matrices and Applications", Contemporary Mathematics, AMS (2008).

P16. A.S. Fokas and E.A.Spence, Novel Analytical and Numerical Methods for Elliptic Boundary Value Problems, in "Highly Oscillatory Problems", Publications of the Newton Institute, CUP (2009).

P17. A.S. Fokas, A. Iserles and S.A. Smitheman, The Unified Transform in Polygonal Domains via the Explicit Fourier Transform of Legendre Polynomials, in "Unified Transform for Boundary Value Problems: Applications and Advances", ed. A.S. Fokas and B. Pelloni, SIAM (2015).

P18. G. Biondini, A.S. Fokas and D. Shepelsky, Comparison of Two Approaches to the Initial-Boundary Value Problem for the Nonlinear Schrodinger Equation on the Half Line with Robin Boundary Conditions, in "Unified Transform for Boundary Value Problems: Applications and advances", ed. A.S. Fokas and B. Pelloni, SIAM (2015).

P19. A.S. Fokas and G.A. Kastis, Mathematical Methods in PET and SPECT Imaging, in the "Handbook of Mathematical Methods of Imaging", 2nd ed., ed. O. Scherzer, Springer (2015).

P20. A.S.Fokas, The Unified Transform in Two dimensions, in "Panorama of Mathematics: Pure and Applied", ed. C.M. da Fonseca, D.V. Huynh, S. Kirkland and V. Kim Tuan, **658**, 167-186, AMS (2016).

P21. A.S. Fokas and K. Kalimeris, A Novel Non-Local Formulation of Water Waves, in "Lectures on the Theory of Water Waves", ed. T.J. Bridges, M.D.Groves and D.P. Nicholls, LMS, 426, Cambridge University Press (2016).

P22. B. Pelloni and A.S. Fokas, Integrable Nonlinear PDEs on the Half-Line, in "Nonlinear Systems and Their Remarkable Mathematical Structures", ed. N. Euler, CRC Press (2018).

P23. A.S. Fokas, P. Hashemzadeh and R. M. Leahy, Which Part of the Neuronal Current Can be Determined be EEG?, in "Fifty Years of Magnetoencephalography: Beginnings, Technical Advances, and Applications", eds. A.C. Papanicolaou, T.P.L. Roberts, J.W. Wheless, Oxford University Press (2020).

P24. N.E. Protonotarios, G.A. Kastis and A.S. Fokas, A New Approach for the Inversion of the Attenuated Radon Transform, in "Mathematical Analysis and Applications", ed. T.M. Rassias and P.M. Pardalos, 433-457, Springer (2019).

P25. M. Lachaab, P.R. Turner and A.S. Fokas, Numerical Evaluation of Fokas' Transform Solution of the Heat Equation on the Half-Line, in "Advanced Computing in Industrial Mathematics", 245-256, Springer International Publishing (2021).

P26. A.S. Fokas and K. Kalimeris, The Unified Transform Method and the Water Wave Problem, in "Nonlinear Water Waves: An Interdisciplinary Interface", ed. J.M.V. Broeck, D. Henry, K. Kalimeris, E. Parau, E. Wahlén, Birkhaüser (2019).

P27. A.S. Fokas, Boundary Value Problems, Medical Imaging and the Asymptotics of Riemann's Function, in "De Gruyter Proceedings in Mathematics", First Congress of Greek Mathematicians FCGM-2018, Athens, Greece, De Gruyter, 51-78 (2020).

P28. N.E. Protonotarios, G.A. Kastis, N. Dikaios and A.S. Fokas, Piecewise Polynomial Inversion of the Radon Transform in Three Space Dimensions via Plane Integration and Applications in Positron Emission Tomography, in "Nonlinear Analysis, Differential Equations, and Applications", ed. T.M. Rassias, 381-396, Springer (2021).

(c) **Contributions to Symposia**

P29. A.S. Fokas, Lie-Bäcklund Theory of Separation of Variables and Conservation Laws in Classical and Quantum Mechanics, Proceedings of the Joint IUTAM/IMU Symposium Group Theoretical

Methods in Mechanics, August 25-29, 1978, Novosibirsk, U.S.S.R., ed. by N.H. Ibragimov and L.V. Ovsiannikov.

P30. R.L. Anderson and A.S. Fokas, Comments on the Symmetry Structure of Bi-Hamiltonian Systems, Proceedings of the International Symposium on Selected Topics in Quantum Field Theory and Math. Physics, June 14-19, 1981, Bechyne' Castle, Czechoslovakia.

P31. M.J. Ablowitz and A.S. Fokas, A Significant, Coherent Nonlinear Phenomenon, Clarkson Innovations **1** (4) (1981).

P32. A.S. Fokas and M.J. Ablowitz, Direct Linearizations of the Korteweg-deVries Equation, in Mathematical Methods in Hydrodynamics and Integrability in Dynamical Systems, ed. M. Tabor and M. Treve (1981).

P33. M.J. Ablowitz and A.S. Fokas, A Direct Linearization Associated with the Benjamin-Ono Equation, in Mathematical Methods in Hydrodynamics and Integrability in Dynamical Systems, ed. M. Tabor and M. Treve (1981).

P34. M.J. Ablowitz and A.S. Fokas, Comments on the Inverse Scattering Transform and Related Nonlinear Evolution Equations, in Nonlinear Phenomena, ed. B. Wolf, Springer-Verlag (1983).

P35. A.S. Fokas, On the Inverse Scattering Transform in Two Spatial and One Temporal Dimensions, in "Nonlinear Waves", ed. L. Debnath, Cambridge University Press (1983).

P36. A.I. Nachman, A.S. Fokas and M.J. Ablowitz, Note on the Inverse Problem for a Class of First Order Multidimensional Systems, Nonlinear Systems of PDEs in Applied Mathematics **23**, 217-222, ed. B. Nicolaenko, D.D. Holm, J.M. Hyman, AMS(1986).

P37. A.S. Fokas: Aspects of Integrability in One and Several Dimensions, in "Topics in Soliton Theory and Exactly Solvable Nonlinear Equations", ed. M.J. Ablowitz, M.D. Kruskal, and B. Fuchssteiner, World Scientific (1987).

P38. A.S. Fokas, Inverse Scattering Transform on the Half-Line: The Nonlinear Analogue of the Sine Transform, in "Inverse Problems: An Interdisciplinary Study", ed. P. C. Sabatier, Academic Press (1987).

P39. P.M. Santini and A.S. Fokas, Symmetries and Bi-Hamiltonian Structures of 2+1 Dimensional Systems, in Topics in Soliton Theory and Exactly Solvable Nonlinear Eqs, ed. M.J. Ablowitz, M.D. Kruskal, and B. Fuchssteiner, World Scientific (1987).

P40. A.S. Fokas and P.M. Santini, Integrable Equations in Multidimensions $(2+1)$ are Bi-Hamiltonian Systems, in "Solitons: Introduction and Applications", ed. M. Lakshmanan, Springer-Verlag (1988).

P41. A.S. Fokas and V. Papageorgiou, Inverse Problems and a Unified Approach to Integrability in 1, 1+1, and 2+1 Dimensions, in Solitons, ed. M. Lakshmanan, Springer-Verlag (1988).

P42. E. Barouch, A.S. Fokas and V. Papageorgiou, Algorithmic Construction of the Recursion Operators of Toda and Landau-Lifshitz Equation, RIMS Publications **650**, 179-196 (1988).

P43. A.S. Fokas and P.M. Santini, Conservation Laws for Integrable Systems, in Symmetries and Nonlinear Phenomena, ed. D. Levi and P. Winternitz (1988).

P44. A.S. Fokas, Linearized Maps for the Davey-Stewartson I Equation, in Integrable Systems and Applications Lecture Notes in Physics **342**, 95-104, Springer-Verlag, eds. M. Balabane, P. Lochak, and C. Sulem (1989).

P45. P.M. Santini and A.S. Fokas, Dromions, A New Manifestation, in "Inverse Methods in Action", Montpellier Proceedings (1989).

P46. P.M. Santini and A.S. Fokas, The Bi-Hamiltonian Formulations of Integrable Evolution Equations in Multidimensions, in Nonlinear Evolution Equations and Dynamical Systems, Balaruc Les Bains, France (1989).

P47. A.S. Fokas and P.M. Santini, A Unified Approach to Recursion Operators, in Solitons in Physics, Mathematics, and Nonlinear Optics, ed. P.J. Olver and D.H. Sattinger, Springer-Verlag (1990).

P48. A.S. Fokas, Some Recent Results in Soliton Theory, in Nonlinear Evolution Equations Integrability and Spectral Methods, ed. A. Degasperis, A.P. Fordy, and M. Lakshmanan, Manchester University Press (1990).

P49. A.S. Fokas, New Manifestations of Solitons, in Solitons in Physics, Mathematics, and Nonlinear Optics, ed. P.J. Olver and D.H. Sattinger, Springer-Verlag (1990).

P50. A.S. Fokas, Boundary Value Problems in $1+1$ and in $2+1$, The Dressing Method, and Cellular Automata, in Nonlinear Evolution Equations and Dynamical Systems, ed. S. Carillo, O. Ragnisco; Springer Verlag (1990).

P51. P.M. Santini and A.S. Fokas, Solitons and Dromions, Coherent Structures in a Nonlinear World, in Nonlinear Evolution Equations and Dynamical Systems, eds. S. Carillo, O. Ragnisco, Springer Verlag (1990).

P52. A.S. Fokas, A.R. Its and Xin Zhou, Continuous and Discrete Painlevé Equations, in "Painlevé transcendents", 33-47, Springer (1992).

P53. A.S. Fokas and G.T. Tu, A Residue Representation for Integrable Equations in Multidimensions, in Nonlinear Dispersive Wave Systems, ed. Lokenath Debnath, World Scientific (1992).

P54. B.A. Dubrovin, A.S. Fokas and P.M. Santini, Spectral Theory of Linear λ-Matrices and the Solution of Certain Nonlinear Algebraic and Functional Equations, in Nonlinear Processes in Physics, eds. A.S. Fokas, D.J. Kaup, A.C. Newell, V.E. Zakharov, Springer-Verlag (1993).

P55. A.S. Fokas, A.R. Its and A.V. Kitaev, Non-Perturbative Two-Dimensional Quantum Gravity and the Isomonodromy Method, in Nonlinear Processes in Physics, eds. A.S. Fokas, D.J. Kaup, A.C. Newell, V.E. Zakharov, Springer-Verlag (1993).

P56. G.D. Pang and A.S. Fokas, Calculation of all Commutation Relations Among Scattering Data without using the R-Matrix Approach, in Nonlinear Processes in Physics, eds. A.S. Fokas, D.J. Kaup, A.C. Newell, V.E. Zakharov, Springer-Verlag (1993).

P57. A.S. Fokas, Initial Boundary-Value Problems for Soliton Equations, in Nonlinear Processes in Physics, eds. A.S. Fokas, D.J. Kaup, A.C. Newell, V.E. Zakharov, Springer-Verlag (1993).

P58. A.S. Fokas and I.M. Gelfand, A Unified Method for Solving Linear and Nonlinear Evolution Equations and an Application to Integrable Surfaces, The Gel'fand Mathematical Seminars, 1993-1995, I.M. Gel'fand, J. Lepowsky, M. Smirnov, eds., Birkhauser (1996).

P59. A.S. Fokas and L. Luo, On the Asymptotic Integrability of a Generalized Burgers Equation, in "Mathematical Problems in the Theory of Water Waves", Contemporary Mathematics, eds. F. Dias, J.-M. Ghidaglia, J.-C. Saut, 85-98, AMS (1996).

P60. A. S. Fokas, I. M. Gelfand and M. V. Zyskin, Nonlinear Integrable Equations and Nonlinear Fourier Transforms, in Arnold-Gelfand Mathematical Seminars, Geometry and Singularity Theory, V. I. Arnold, I. M. Gelfand, M. Smirnov, V. S. Retakh, eds, Birkhäuser (1997).

P61. A.S. Fokas, Asymptotic Integrability of Physical Equations, Mathematical Sciences and Applications **10**, 45-51 (1997).

P62. A. Folguera and A.S. Fokas, Nonlinear Systems of the Davey-Stewartson type, Proc. of the PIERS Conference, Cambridge (1997).

P63. P. Bressloff and A.S. Fokas, A new spectral transform for solving the continuous and spatially discrete heat equations on simple trees, in *Symmetry and Integrability*, P.A. Clarkson and F.W. Nijhoff, eds., LMS Lecture Notes series 255, 178-194 (1999).

P64. A.S. Fokas, A New Approach for Solving PDEs, in Chaos and Order, Pneumaticos Press (2000).

P65. A.S. Fokas and B. Pelloni, Boundary Value Problems for Linearized Boussinesq-Type Systems, Proceedings of the 5th International conference on mathematical and numerical aspects of wave propagation, A. Bermudez et al., eds., SIAM (2000).

P66. F. Finkel and A.S. Fokas, A New Immersion Formula for Surfaces on Lie Algebras and Integrable Equations, CRM Proceedings and Lecture Notes (2001).

P67. A.S. Fokas, Applied Mathematics and the Imaging of the Brain, Asymptopia, September (2002).

P68. A.S. Fokas, Integrability, Imaging of the Brain and Beyond, Third Mediterranean Conference on Mathematical Education, Helenic Mathematical Society (2003).

P69. A.S. Fokas and D. ben-Avraham, A Generalisation of both the Method of Images and of the Classical Integral Transforms, pp 260-276, in Advances in Scattering and Biomedical Engineering, D.I. Fotiadis and C.V. Massalas eds., World Scientific, New Jersey (2004).

P70. A.S. Fokas, An Effective Approach to Electro-Magneto-Encephalography, IEEE-BIBE (2008).

P71. P.E. Barbano, A.S. Fokas and G. Kastis, Analytical Reconstructions for PET and SPECT and Empoying L1 Denoising, 16th International Conference on Digital Signal Processing, IEEE-DSP, Greece (2009).

P72. A.S. Fokas, Generalized Fourier Transform, Inverse Problems and Integrability in 4+2, ESAIM Proceedings, eds. H. Ammari, vol. **26**, 55-64 (2009).

P73. G.A. Kastis, A. Samartzis and A.S. Fokas, Comparison between Filtered Back-Projection and Spline and Chebysev Reconstruction Techniques, European Journal Of Nuclear Medicine And Molecular Imaging, **37**(2), S221-S221 (2010).

P74. G.A. Kastis, A. Gaitanis, Y. Fernadez, G. Kontaxakis and A.S. Fokas, Evaluation of a Spline Reconstruction Technique: Comparison with FBP, MLEM and OSEM, IEEE Nuclear Science Symposium/Medical Imaging Conference, USA (2010).

P75. P.E. Barbano, A.S. Fokas and C.-B. Schönlieb, Alternating Regularisation in Measurement and Image Space for PET Reconstruction, 9th International Conference on Sampling Theory and Applications, Singapore (2011).

P76. P.E. Barbano and A.S. Fokas, Multi-Resolution Inversion Algorithm for the Attenuated Radon Transform, 21st IEEE, MLSP, Chinese Acad Sci, China (2011).

P77. G.A. Kastis, A. Gaitanis, T. Skouras and A.S. Fokas, Evaluation of a Spline Reconstruction Technique for SPECT: Comparison with FBP and OSEM, IEEE Nuclear Science Symposium/Medical Imaging Conference, Spain (2011).

P78. A.S. Fokas and J. Lenells, Pertubative and Exact Results for the Neumann Values for the Nonlinear Schrodinger Equation on the Half-line, Journal of Physics: Conference Series, **482**, 012015 (2014).

P79. A.S. Fokas and G.A. Kastis, Boundary value problems and medical imaging, Journal of Physics: Conference Series **490**, 012017 (2014).

P80. G. Kastis, D. Kyriakopoulou and A.S. Fokas, An Analytic Reconstruction Method for PET based on Cubic Splines, Journal of Physics: Conference Series **490**, 012128 (2014).

P81. P. Hashemzadeh and A.S. Fokas, A numerical Technique for Linear Elliptic PDEs in a Square Domain, NumAn2014, Conference Proceedings 145–150 (2014).

P82. G.A. Kastis, A. Gaitanis and A.S. Fokas, Quantitative Evaluation of SRT for PET Imaging: Comparison with FBP and OSEM, NumAn2014, Conference Proceedings 2–5 (2014).

P83. P. Hashemzadeh, A.S. Fokas and O. Hauk, Estimation of the Neuronal Current via Electro-Magneto-Encephalography Using Real Data, NumAn2014, Conference Proceedings 140–144 (2014).

P84. A.S. Fokas, G.A. Kastis and N.E. Protonotarios, Analytic Reconstructions for PET, SPECT, MEG and EEG, Applied Inverse Problems, Finland (2015).

P85. N.E. Protonotarios, A.S. Fokas and G.A. Kastis, Attenuated Radon transform Inversion Through Piecewise Polynomial Interpolation of SPECT/CT data, 5th International Conference on Mathematical Modeling in Physical Sciences 2016, Greece (2016).

P86. N.E. Protonotarios, A.S. Fokas, A. Gaitanis and G.A. Kastis, Inversion of the Attenuated Radon Transform Using Cubic Splines, Physica Medica: European Journal of Medical Physics, **32**, 242–243 (2016).

P87. N.E. Protonotarios, A.S. Fokas, A. Gaitanis and G.A. Kastis, aSRT: A New Analytic Reconstruction Algorithm for SPECT, IEEE, Nuclear Science Symposium/Medical Imaging Conference, Strasbourg, France (2016).

P88. N.E. Protonotarios, A. S. Fokas, and G. A. Kastis, Attenuated Spline Reconstruction Technique for SPECT/CT, 9th Conference of the Eastern Mediterranean Region and the Italian Region of the International Biometric Society EMR-IBS, Thessaloniki, Greece (2017).

P89. L.J. Ayton, M. Colbrook and A.S. Fokas, The Unified Transform: A Spectral Collocation Method for Acoustic Scattering, 2019 AIAA/CEAS Aeroacoustics Conference, Delft, Netherlands (2019).

P90. N.E. Protonotarios, A. Charalambopoulos, G.A. Kastis, K. Kacperski and A.S. Fokas, A Spline Approach to Parallel-Hole Collimator Deblurring for aSRT-Reconstructed SPECT Images, The 19th IEEE International Conference on Bioinformatics and Bioengineering, BIBE, Athens, Greece (2019).

P91. A.S. Fokas, Boundary Value Problems, Medical Imaging and the Asymptotics of Riemann's Function, First Congress of Greek Mathematicians FCGM-2018, I. Emmanouil, A. Fellouris, A. Giannopoulos and S. Lambropoulou eds., Berlin, Boston: De Gruyter, pp. 51-7, Athens, Greece (2020).

P92. G. Paraskevopoulou, A.S. Fokas, A. Charalambopoulos and S. Perantonis, Inverse EEG Problem, Minimization and Numerical Solutions, in Chaos, Fractals and Complexity, T. Bountis, F. Vallianatos, A. Provata, D. Kugiumtzis and Y. Kominis eds., Spinger Cham, pp. 189-198 (2023).

P93. Y. Cao, A.S. Fokas and J. He, High-Order Localized Wave Solutions of the New (3+1)-Dimensional Kadomtsev-Petviashvili Equation, in Chaos, Fractals and Complexity, T. Bountis, F. Vallianatos, A. Provata, D. Kugiumtzis and Y. Kominis eds., Spinger Cham, pp. 265-274 (2023).

P94. A.S. Fokas, K. Kalimeris and J. Lenells, A Novel Difference-Integral Equation Satisfied Asymptotically by the Riemann Zeta, in Chaos, Fractals and Complexity, T. Bountis, F. Vallianatos, A. Provata, D. Kugiumtzis and Y. Kominis eds., Spinger Cham, pp. 319-332 (2023).

OTHER ARTICLES

- A.S. Fokas, Mathematics and the Brain, Proceedings of the Academy of Athens, vol. 80 (2005).
- A.S. Fokas, Conformal Mappings: In Memory of Caratheodory, Proceedings of the Academy of Athens, vol. 82 (2007).
- A.S. Fokas, Mathematics, Medical Imaging and the Search for Consciousness, Proceedings of the Academy of Athens, vol. 82 (2007).
- A.S. Fokas, Mathematics and Innate Knowledge, National Institute of Research, Greece (2008).
- A.S. Fokas and E. Moutsopoulos, Mathematics and Innate Knowledge: From Positions of the Ancient Greeks to Neuroscience, "Philosophy", Yearbook of the Research Centre for Greek Philosophy of the Academy of Athens, vol. 40 (2010).
- A.S. Fokas and G. Kastis, An Analytical Algorithm for PET, Proceedings of the Academy of Athens, vol. 85A (2010).
- A.S. Fokas, From Aristotle to Darwin, Proceedings of the Academy of Athens, vol. 89A (2014).
- A.S. Fokas, From the Fourier Transform to the Unified Transform, Proceedings of the Academy of Athens, vol. 90A (2015).
- A.S. Fokas, The Famous Reimann Hypothesis, Proceedings of the Academy of Athens, vol. 92A (2017).

INVITED TALKS

- Joint IUTAM/IMU Symposium Group Theoretical Methods in Mechanics, Novosibirsk, USSR, August 25-29, 1978.
- Applications of Lie-Bäcklund Symmetries, UCLA, Los Angeles, USA, January 1979.
- Lie-Bäcklund Operators and Exactly Solvable Evolution Equations, California Institute of Technology, Pasadena, USA, February 1979.

- Workshop on Nonlinear Equations, Potsdam, New York, USA, July 29 - August 10, 1979.
- A Symmetry Approach to Exactly Solvable Evolution Equations, Courant Institute of Mathematical Sciences, New York University, New York, USA, February 1980.
- Hereditary Operators and Their Applications, Clarkson University, Potsdam, USA, February 1980.
- One-Parameter Families of Solutions of the Sixth Painlevé Equation, University of Georgia, Athens, USA, June 1980.
- Workshop on Nonlinear Evolution Equations and Dynamical Systems, Crete, Greece, July 9-23, 1980.
- Linearization of the Korteweg-deVries and Painlevé II Equation, Clarkson University, Potsdam, USA, May 1981.
- Workshop on Nonlinear Evolution Equations, Soliton and Spectral Methods, Trieste, Italy, August 24-29, 1981.
- Linearization of the Korteweg-deVries and Painlevé II Equations, University of Georgia, Athens, USA, October 1981.
- Linearization of the Korteweg-deVries and Painlevé II Equations, Courant Institute of Mathematical Sciences, New York University, New York, USA, November 1981.
- Linearization of the Korteweg-deVries and Painlevé II Equations, Princeton University, Princeton, USA, November 1981.
- Linearizations of Korteweg-deVries, Painlevé II and Benjamin-Ono Equation, California Institute of Technology, Pasadena, USA, December 1981.
- Workshop on Mathematical Methods in Hydrodynamics and Integrability in Related Dynamical Systems, La Jolla, USA, December 7-9, 1981.
- The Inverse Scattering of the Kadomtsev-Petviashvili Equation, Yale University, New Haven, USA, March 1982.
- Solitons and the Inverse Scattering Transform in Multidimensions, Massachusetts Institute of Technology, Cambridge, USA, April, 1982.
- Scott Russell Centenary Conference, Edinburgh, UK, August 22-27, 1982.

- Twenty-Fifth Annual Meeting of the Society for Natural Philosophy, Cornell University, Ithaca, New York, USA, September 22-25, 1982.
- Multidimensional Inverse Scattering Transform, University of Georgia, Athens, USA, October 1982.
- The Inverse Scattering Transform in Multidimensions, Stanford University, Stanford, USA, November 1982.
- School and Workshop, Nonlinear Phenomena, Qaxtapec, Mexico, November 29 - December 17, 1982 (the author gave a series of five invited lectures).
- Solitons and the Inverse Scattering Transform in Multidimensions, Harvard University, Cambridge, USA, April, 1983.
- Solitons and the Inverse Scattering Transform in Multidimensions, State University of New York at Stony Brook, Stony Brook, USA, April, 1983.
- 2nd Workshop on Nonlinear Evolution Equations and Dynamical Systems, Chania, Crete, Greece, August 9-25, 1983.
- 2nd International Workshop on Nonlinear and Turbulent Processes in Physics, Kiev, USSR, October 14-22, 1983.
- AMS SIAM Summer Seminar on Nonlinear Systems of PDE in Applied Mathematics, Los Alamos, USA, July 22 - August 4, 1984.
- 3rd Workshop on Nonlinear Evolution Equations and Dynamical Systems, Gallipoli, Italy, June 20 - July 5, 1985.
- Exactly Solvable Nonlinear Equations in Multidimensions, RPI, Troy, October, 1985.
- Nonlinear Evolution Equations, Solitons and the Inverse Scattering Transform, West Germany, July 27 - August 2, 1986.
- The Nonlinear Systems Workshop, University of Montreal, Montreal, Canada, May 5-9, 1986.
- Nonlinear Evolution Equations, Solitons and the IST, Oberwolfach, West Germany, July 1986.
- Inverse Problems, Montpellier, France, November 1986.
- "Solitons", Winter School, Tiruchirapalli, India, January 1987.

- Aspects of Integrability in One and Several Dimensions, Jawaharlal Nehru University, New Delhi, India, January 1987.
- Recursion Operators in Multidimensions and Nonlinear Schrödinger Equation on the Semi-Line, Kiev, USSR, April 13-25, 1987.
- IST on Half-Line, Pennsylvania State University, University Park, USA, May 18, 1987.
- Inverse Scattering in Multidimension, Stanford University, Stanford, USA, October 1987.
- International School on Applied Mathematics, Symmetries and Nonlinear Phenomena, Paipa, Colombia, February 1988.
- Recent Developments in Soliton Theory, University of Arizona, Tucson, AZ, April 1988.
- Recent Developments in Soliton Theory, Department of Applied Mathematics, California Institute of Technology, Pasadena, USA, May 1988.
- "Nonlinear Phenomena", Ile D'Oleron, France, June 20-24, 1988.
- Solitons in Cellular Automata, University of Rome, Italy, July 1988.
- Nonlinear Evolution Equations, Integrability and Spectral Methods, Lake Como, Italy, July 4-15, 1988.
- Nearly Integrable Systems and Applications, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, USA, September 12-16, 1988.
- New Manifestations of Solitons, Workshop on Solitons in Nonlinear Optics and Plasma Physics, November 7-11, 1988.
- Solitons and Cellular Automata, Columbia University, New York, USA, November 1988.
- The Integrability of the Davey-Stewartson Equation, University of Pittsburgh, Pittsburgh, USA, November 1988.
- Recent Developments in Soliton Theory, Pennsylvania State University, University Park, USA, November 1988.
- Multidimensional Solitons, University of Buffalo, Buffalo, USA, February 1989.

- Coherent Structures in Cellular Automata, Technical University of Istanbul, Istanbul, Turkey, April 1989.
- Symmetries and Integrability, Research Institute for Basic Sciences, Kocaeli, Turkey, April 1989.
- New Manifestations of Coherent Structures, 5th International Conference on Solitons, Crete, Greece, July 1989.
- Coherent Structures in Multidimensions and in Cellular Automata, Courant Institute of Mathematical Sciences, New York University, New York, USA, September 1989.
- Integrability and Coherent Structures in Multidimensions, Yale University, New Haven, USA, October 1989.
- Coherent Structures and Integrability, IV International Workshop on Nonlinear and Turbulent Processes in Physics, Kiev, USSR, October 1989.
- Dromions in Multidimensions, University of Arizona, Tucson, USA, March 1990.
- New Coherent Structures, UCLA, Los Angeles, USA, March 1990.
- 6th International Workshop on Nonlinear Evolution Equations and Dynamical Systems, NEEDS '90, Dubna, USSR, July 16-26, 1990.
- NATO Workshop on Painlevé Equations, Sainte-Adéle (Quebec), Canada, September 3-7, 1990.
- Recent Developments in Soliton Theory and the Role of Integrability in 2D Quantum Gravity, Rutgers University, New Brunswick, USA, February 1991.
- Continuous and Discrete Painlevé Equations and their Appearance in 2D Quantum Gravity, Princeton University, Princeton, USA, February 1991.
- Continuous and Discrete Painlevé Equations, Georgia Institute of Technology, Atlanta, USA, March 1991.
- Continuous and Discrete Painlevé Equations, Duke University, Durham, USA, March 1991.
- Dromions and the Davey Stewartson Equation, NSF-CBMS Conference on "Nonlinear Dispersive Wave Systems", Orlando, Florida, USA, March 11-15, 1991.

- Similarity Solutions of Differential Equations, University of Pittsburgh, Pittsburgh, USA, April 26-28, 1991.
- 7th Workshop in Nonlinear Evolution Equations and Dynamical Systems, Gallipoli, Italy, June 1991.
- 2D Quantum Gravity and Painlevé Equations, University of Rome, Rome, Italy, June 1991.
- The d-Bar Method, University of Rutgers, New Brunswick, USA, December 1991.
- Initial-Boundary Value Problems for Integrable Equations, Yale University, New Haven, USA, April 7, 1992.
- Integrability, New Jersey Institute of Technology, Newark, USA, April 8, 1992.
- An Initial Boundary-Value Problem for the KdV Equation, Exeter, UK, November 1992.
- Initial Boundary-Value Problems, 2D Quantum Gravity, Integrable Functional Equations, Euler Institute, St. Petersburg, Russia, November 1992.
- Initial Boundary Value Problem for Dispersive Systems, 1992-1993 Mathematics Colloquium Series, University of Central Florida, in memory of Professor Edward Norman, Orlando, USA, April 12, 1993.
- Integrability and Beyond, 10th Workshop in Nonlinear Evolution Equations and Dynamical Systems, Gallipoli, Italy, September 1993.
- Applications of the Half-Line Problem of the NLS Equation to Nonlinear Optics, Nonlinear Optics, University of Arizona, Tucson, USA, September 1993.
- Participation in "Functional Analysis on the Eve of the Twenty-First Century", Rutgers University, New Brunswick, USA, October 24-27, 1993.
- Integrability and Beyond, University of Glasgow, Glasgow, UK, November 1993.
- Initial-Boundary Value Problems, Workshop on Integrable Systems, University of Leeds, Leeds, UK, November 1993.
- The Nonlinear Schrödinger on the half-line, Duke University, Durham, USA, January 1994.
- Chaos, Magnetoencephalography, Duke University, Durham, USA, January 1994.

- Initial-Boundary Value Problems for Soliton Equations, Oxford University, Oxford, UK, January 31, 1994.
- The Isomonodrony Approach to 2D Quantum Gravity, Oxford University, Oxford, UK, February 1, 1994.
- Integrability and Chaos, Imperial College, London, UK, February 2, 1994.
- Integrability, Non Integrability and Chaos, University of Leeds, Leeds, UK, February 7, 1994.
- Chaos and Anti-Chaos, University of Warwick, Coventry, UK, February 16, 1994.
- Integrable Equations on the Half Line, University of Nantes, Nantes, France, May 19, 1994.
- Taxis and Chaos, Poincare Institute, Paris, France, May 20, 1994.
- Integrability and Chaos, University of Manchester, Manchester, UK, June 1, 1994.
- Integrability and Beyond, Technical University of Berlin, Berlin, Germany, June 17, 1994.
- A Unified Approach to Solving Linear and Nonlinear Equations, University of Patras, Patras, Greece, June 1994.
- Peakons and Compactons, University of Arizona (conf. of Airforce), Tucson, USA, October 1994.
- Review of Integrable Systems, University of Purdue at Indianapolis, Indianapolis, USA, October 1994.
- Computerized Tomography and Magnetoencephalography, Clarkson University, Potsdam, USA, November 1994.
- A New Class of Physically Important Integrable Equations, Montpellier, France, February 1995.
- Asymptotic Integrability, University of Leeds, Leeds, UK, March 1995.
- A New Class of Physically Important Integrable Equations, University of Kent, Canterbury, UK, March 1995.
- 2-dimensional Quantum Gravity, Painlevé Equations and WKB, Newton Institute, University of Cambridge, Cambridge, UK, March 1995.
- Magnetoencephalography, University of Patras, Patras, Greece, April 1995.

- Spectral Theory, Integrability, and Chaos, Newton Institute, University of Cambridge, Cambridge, UK, April 1995.
- KdV and Beyond, Amsterdam, Netherlands, April 1995.
- Asymptotic Integrability, Luminy, France, May 15-19, 1995.
- Integrable Algebraic Equations and Algebraic Geometry, Paris VI, France, May 1995.
- Water waves, Multidimensional Diffraction and the Complex Plane, Paris IV, France, May 1995.
- Integrability and Inverse Problems Arising in Medicine, Imperial College, London, UK, June 1995.
- On a New Class of Physically Important Integrable Equations, Conference on Nonlinear Waves, Hokaido University, Sapporo, Japan, July 1995.
- Curves, Surfaces, and Their Evolution, Department of Physics, Tokyo University, Tokyo, Japan, July 24, 1995.
- Symmetries, Their Generalization, and Asymptotic Integrability, Department of Mathematics, Tokyo University, Tokyo, Japan, July 24, 1995.
- Inverse Problems Arising in Medicine, Ryukoku University, Kyoto, Japan, July 25, 1995.
- Integrability Versus Chaos, RIMS, University of Kyoto, Kyoto, Japan, July 26, 1995.
- Integrability and Magnetoencephalography, Conference for the 70th birthday of M. Kruskal, University of Colorado at Boulder, Boulder, USA, August 3, 1995.
- Asymptotic Integrability, Nonlinear Optics Workshop, University of Arizona, Tucson, USA, 1-3 October, 1995.
- Initial-Boundary Value Problems for Certain Physical Nonlinear Equations, University of Bath, Bath, UK, February 23, 1996.
- The Effective Solution of Certain Nonlinear IBV Problems, University of Edinburgh, Edinburgh, UK, March 8, 1996.
- IBV Problems for Linear and Nonlinear Equations, Ohio University, Athens, USA, April 1, 1996.
- A Unified Method for Solving Linear and Certain Nonlinear Equations, Loughborough University of Technology, Loughborough, UK, April 26, 1996.

- IBV Problems for Linear and Nonlinear Equations, University of Bristol, Bristol, UK, May 9, 1996.
- Three Lectures on Painlevé Equations, in the Workshop on the Theory of Nonlinear Special Functions, University of Montreal, Montreal, Canada, May 13-18, 1996.
- Lax Pairs and Integrability, in Recent Advances in PDE's and Applications (in honor of P.D. Lax and L. Nirenberg), Venice, Italy, June 10-14, 1996.
- IBV Problems for Discrete Integrable Equations, in Symmetries and Integrability of Discrete Equations, University of Kent, Canterbury, UK, July 1-6, 1996.
- Integrability of IBV Problems, in Second World Congress of Nonlinear Analysis, Athens, Greece, July 10-17, 1996.
- Integrability, in Ninth Summer Workshop on Complexity and Chaotic Dynamics, Patras, Greece, July 22 - August 2, 1996.
- A Unified Approach to Integrability, Princeton University, Princeton, USA, October 3, 1996.
- A Unified Transform Method for Solving PDE's in Two Variables, Massachusetts Institute of Technology, Cambridge, USA, October 8, 1996.
- Recent Applications of the Painlevé Equations, University of Leeds, Leeds, UK, February 21, 1997.
- Integrability: Fourier Transforms and Beyond, Imperial College, London, UK, February 27, 1997.
- Inverse Problems and the DBAR Method, Loughborough University of Technology, Loughborough, UK, March 10, 1997.
- A New Spectral Method for Solving Linear and Certain Nonlinear PDE's, University of Illinois at Urbana, Urbana, USA, April 8, 1997.
- Integrability: From d'Alembert to Lax, Indiana University-Purdue University Indianapolis, Indianapolis, USA, April 10, 1997.
- From d'Alembert to Lax, University of Sussex, Brighton, UK, May 21, 1997.
- A Unification of Integrability, I. Newton Institute, Cambridge, UK, June 2, 1997.
- A New Method for Solving IBV Problems, University of Amsterdam, Netherlands, June 12, 1997.

- The Spectral Method for Colliding Gravitational Waves, Oxford University, Oxford, UK, June 17, 1997.
- A New Method for Solving IBV Problems, in NEED's Conference, Crete, Greece, June 27, 1997.
- Three lectures on Integrability in the Conference on Nonlinear Dispersive Waves, Anogia, Greece, June 30 - July 5, 1997.
- Inverse Problems in Medicine, Democritos Laboratories, Athens, Greece, July 7, 1997.
- Open Problems in Integrable Systems, Loughborough University, Loughborough, UK, November 29, 1997.
- The Ehrenpreis Principle for Nonlinear Integrable Equations, Paris VI, France, January 24, 1998.
- Nonlinear PDE's in Arbitrary Domains, University of Warwick, Coventry, UK, February 13, 1998.
- Integrability and Spectral Theory, Imperial College, London, UK, March 5, 1998.
- Linear and Integrable Nonlinear PDEs in Arbitrary Domains, King's College, London, UK, May 12, 1998.
- Linear and Integrable Nonlinear PDEs in Arbitrary Domains, Department of Theoretical Mechanics, University of Nottingham, UK, May 20, 1998.
- The Constructive Implementation and the Nonlinearization of the Ehrenpreis Principle, Integrable Systems, Guardamar, Spain, June 15-20, 1998.
- Integral Transforms, Spectral Theory and the d-Bar Problem, NEEDS, Leeds, UK, June 21-28, 1998.
- The synthesis of Separation of Variables, Brown University, Providence, USA, March 29, 1999.
- A New Spectral Method for Boundary Value Problems, California Institute of Technology, Pasadena, USA, April 5, 1999.
- Integrability and the Ehrenpreis Principle, University of California at Irvine, Irvine, USA, April 6, 1999.
- A Synthesis of Separation of Variables for Linear and for Integrable nonlinear PDE's, Mathematical Science Research Institute, Berkeley, USA, April 8, 1999.

- Boundary Value Problems, University College, UK, April 1999.
- Boundary Value Problems, the Ehrenpreis Principle and Lax pairs, Oxford University, Oxford, UK, May 10, 1999.
- Mastersymmetries and Asymptotic Integrability, ICMS, Edinburgh, UK, June 2, 1999.
- A Formula for Constructing Infinitely Many Surfaces, Halifax, Canada, June 13, 1999.
- Boundary Value Problems, the Eherenpreis Principle and Lax pairs, Cambridge University, Cambridge, UK, June 15, 1999.
- A Transform Method for Boundary Value Problems for Integrable PDE's, ICIAM99, Edinburgh, UK, July 5, 1999.
- Boundary Value Problems for Integrable PDEs, University of Paris VII, France, February 9, 2000.
- Spectral Theory and Nonlinear PDEs, Heriot-Watt University, UK, March 3, 2000.
- The Interaction of Lumps and Line Solitons in Multidimensions, University of Leeds, Leeds, UK, March 10, 2000.
- Fuchsian Equations, Painlevé Equations and the Riemann-Hilbert Problem, Imperial College, London, UK, May 5, 2000.
- Differential Forms and Integrability, Montpellier, France, June 21, 2000.
- The Painlevé Equations and an Application to the Hele-Shaw Problem, University of New South Wales, Australia, June 29, 2000.
- Boundary Value Problems for Linear and for Integrable Nonlinear PDE's, Annual Meeting of the Australian Mathematical Society, Brisbane, Australia, July 2, 2000.
- Lumps and Line Solitons, University of Queensland, Brisbane, Australia, July 3, 2000.
- A New Approach for Solving Boundary Value Problems, Chania, Greece, July 25, 2000.
- Boundary Value Problems for Linear and Nonlinear PDEs, Northwestern University, Evanston, USA, Nov 30, 2000.
- Differential Forms, Spectral Theory and Boundary Value Problems, Duke University, Durham, USA, April 2001.

- Differential Forms and Integrability, Stanford University, Stanford, USA, April 13, 2001.
- Differential Forms and Integrability, University of Kent, Canterbury, UK, May 11, 2001.
- Differential Forms, Spectral Theory and Boundary Value Problems, Paris VI, France, May 14, 2001.
- Differential Forms, Spectral Theory and Boundary Value Problems, University of Bath, Bath, UK, June 6, 2001.
- Boundary Value Problems in Two Dimensions, conference "The legacy of IST", Mount Holyoke College, Boston, USA, June 17-21, 2001.
- Differential Forms, Spectral Theory and Boundary Value Problems, Conference for the 60th birthday of C. Dafermos, Heraklion, Greece, June 22-24, 2001.
- Differential Forms, Spectral Theory and Boundary Value Problems, The Naylor Lecture, London Mathematical Society, London, UK, November 23, 2001.
- Some Remarks on Applied Mathematics and the Imaging of the Brain, Annual Meeting of the Greek Mathematical Society, Rhodes, Greece, November 25, 2001.
- Mastersymmetries, ICMS, Edinburgh, UK, December 6, 2001.
- Differential Forms, Spectral Theory and Boundary Value Problems, I. Newton Institute, Cambridge, UK, December 17, 2001.
- A New Method for Boundary Value Problems, Inauguration of the Nonlinear Institute, Loughborough University, Loughborough, UK, February 8, 2002.
- Differential Forms, Spectral Theory and Boundary Value Problems, Centre for Mathematical Analysis and Its Applications, University of Sussex, Brighton, UK, February 27, 2002.
- The Impact of Mathematics on the Imaging of the Brain, Metsovo, Greece, 1-3 March, 2002.
- Integrability: Riemann-Hilbert and d-Bar Problems, What Is Next?, University of Oxford, Oxford, UK, May 12, 2002.
- Integrability: Riemann-Hilbert and d-Bar Problems, What Is Next?, Mathematical Physics Colloquium, University of Cambridge, Cambridge, UK, May 31, 2002.
- A New Method for Boundary Value Problems, Conference on PDEs, Lund, Sweden, May 22-24, 2002.

- Differential Forms, Spectral Theory and Boundary Value Problems, "Nonlinear Models in Physics: Perspectives for the XXI Century", Madrid, Spain, June 7-8, 2002.
- A New Generalised Fourier Transform and its Nonlinear Analogues, Conference on Differential Equations, Patras, Greece, July 1-5, 2002.
- On a Long-standing Open Problem: the Attenuated Radon Transform, Conference on Chaos and Dynamical Systems, Patras, Greece, August 19-30, 2002.
- Boundary Value Problems for Integrable PDEs, Courant Institute of Mathematical Sciences, New York University, New York, USA, October 1, 2002.
- Boundary Value Problems for Integrable PDEs, University of South Carolina, Columbia, USA, October 25, 2002.
- Integrability, Imaging of the Brain and Beyond, Third Mediterranean Conference in Mathematical Education, Athens, Greece, January 2003.
- Integrability, Imaging of the Brain and BVPs, The Bristol Mathematical Colloquium, University of Bristol, Bristol, UK, March 7, 2003.
- Integrable Nonlinear PDEs on the Half-Line, Colloquium in Honour of H. McKean, Paris, France, April 3, 2003.
- Boundary Value Problems for Integrable PDEs, Third IMACS International Conference, University of Georgia, Athens, USA, April 8, 2003.
- Boundary Value Problems for Integrable PDEs, Cardiff University, Cardiff, UK, April 30, 2003.
- Integrability, Imaging of the Brain and Complex Variables, Conference on Differential and Functional Equations in the Complex Domain, Loughborough University, Loughborough, UK, June 29, 2003.
- A New Method for Boundary Value Problems, Sixth International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering, Tsepelovo, Greece, September 19, 2003.
- Integrability, Imaging of the Brain and BVPs, HERCMA, Athens, Greece, September 25, 2003.
- The Impact of Integrability on the Imaging of the Brain, University of Leeds, Leeds, UK, October 16, 2003.

- Complex Analysis and Inverse Spectral Method in Boundary-Value Problems, A four Lectures Minicourse at the Poincare Institute, France, November 2003.
- Mathematical Aspects of Medical Imaging, Indiana University-Purdue University Indianapolis, Indianapolis, USA, November 2003.
- Generalised Fourier Transforms and Boundary-Value Problems, Poincare Institute, France, December 18, 2003.
- Generalised Fourier Transforms, their Nonlinearisation and Imaging of the Brain, Center of Mathematical Sciences Colloquium, University of Cambridge, Cambridge, UK, March 8, 2004.
- Coherent Structures in Multidimensions, British Applied Mathematics Colloquium, UK, April 19, 2004.
- Coherent Structures in Multidimensions, Indiana University-Purdue University Indianapolis, Indianapolis, USA, April 28, 2004.
- Generalised Fourier Transforms, Their Nonlinearisation and Imaging of the Brain, Paris VII, France, May 18, 2004.
- MEG and SPECT, Imperial College, London, UK, June 16, 2004.
- From Tschebysheff and Hermite Polynomials to Functional Brain Imaging and Quantum Gravity: A Riemann-Hilbert and d-Bar Approach, International Workshop on Orthogonal Polynomials, University Carles III de Madrit, Madrid, Spain, July 5, 2004.
- Mathematics and the Search of Truth, opening address at the 45th International Mathematical Olympiad, Athens, Greece, July 11, 2004.
- Mathematical Problems in Medical Imaging, Complexity in Science and Society, University of Patras, Patras, Greece, July 18, 2004.
- Medical Imaging, A five lectures Minicourse, Clarkson University, Potsdam, USA, September 2004.
- Integrability in Multidimensions and Imaging of the Brain, Tenth Panhellenic Conference on Mathematical Analysis, Technical University of Athens, Athens, Greece, September 30, 2004.
- Single Photon Emission Computer Tomography, Magnetoencephalography, and Protein Folding, Conference for the Retirement of J. Papadakis, University of Crete, Heraklion, Greece, November 6, 2004.

- Integrability in Multidimensions, Sir R. Penrose Residence, UK, December 8, 2004.
- Single Photon Emission Computer Tomography, Magnetoencephalography, and Protein Folding, Cambridge Computational Biology Institute, University of Cambridge, Cambridge, UK, November 18, 2005.
- A New Method for Boundary Value Problems, National Technical University of Athens, Athens, Greece, December 17, 2005.
- Water Waves and Integrability in Multidimensions, Fluid Mechanics Colloquium, University of Cambridge, Cambridge, UK, January 2005.
- Imaging of the Brain and Integrability in Multidimensions, University of California at Berkeley, Berkeley, USA, February 2, 2005.
- The Inversion of the Attenuated Radon Transform, University of Rutgers, New Brunswick, USA, February 13, 2005.
- Research and Technology, Megaron (the Athens Concert Hall), Athens, Greece, February 28, 2005.
- The Impact of Mathematics on Medical Imaging, Aretaion Hospital, University of Athens, Athens, Greece, March 22, 2005.
- Mathematics and the Imaging of the Brain, Astrophysical Society of Western Greece, Greece, March 26, 2005.
- Mathematics and the Search for Truth, Vikelaia Municipal Library, Heraklion, Greece, March 28, 2005.
- Mathematics, Imaging of the Brain and the Search for Truth, Oxford University, Oxford, UK, April 28, 2005.
- New Perspectives for Boundary Value Problems and Their Asymptotics, ten lectures as the Principal speaker in an NSF-CBMS Conference, University of Texas - Pan American, Edinburg, USA, May 16-20, 2005.
- Generalized Fourier Transforms, their Nonlinearization and the Imaging of the Brain, Conference on "Computational Methods and Function Theory", University of Joensuu, Finland, June 13-17 2005.

- The Dbar Formulation, Imaging of the Brain and Integrability in Multidimensions, Conference on "Nonlinear Waves, Integrable Systems and Applications", for the occasion of the 60th birthday of M.J. Ablowitz, University of Colorado, USA, June 4-8, 2005.

- Integrable PDEs and the Inverse Scattering Transform, three lectures at the CMS/EPSRC Short Course on "Nonlinear Wave Phenomena", University of Reading, Reading, UK, July 4-9, 2005.

- Integrable Dispersive PDEs, three lectures at the Euroconference "Nonlinear Dispersive Phenomena", Anogia, Greece, July 9-15, 2005.

- Imaging of the Brain, two lectures at the Workshop on "Dynamic Strategies in Education", Delphoi, Greece, August 18, 2005.

- The Global Relation and Boundary Value Problems, five lectures delivered at Clarkson University, Potsdam, USA, September 7-14, 2005.

- The analytical Inversion of Integrals Arising in the Imaging of the Brain and in the Dirichlet to Neumann Map, Conference for the 80th birthday of M.D. Kruskal, University of Rutgers, New Brunswick, USA, September 15-16, 2005.

- The Dirichlet to Neumann-Map for Linear and Integrable Nonlinear PDEs, Conference on "Riemann-Hilbert Problems Integrability and Asymptotics", SISSA, Italy, September 20-25, 2005.

- Imaging of the Brain and the Dirichlet to Neumann Map for Bi-Hamiltonian Systems, Conference on "The Legacy of W.R. Hamilton", Royal Irish Academy, Ireland, September 30, 2005.

- Mathematics and the Brain, Inaugural address at the Academy of Athens, Athens, Greece, October 25, 2005.

- Meritocracy and Science in Ancient Greece, in the Presentation of the book of Minister Dukas, Grande Bretagne, Athens, November 12, 2005.

- Generalised Fourier Transforms, Dirichlet to Neumann Maps and the Imaging of the Brain, SIAM Invited Address at the Annual meeting of AMS and MAA, San Antonio, USA, January 2006.

- New Transform Methods for Linear and Nonlinear PDEs, March 13, 2006.

- Mathematics and the Brain, Athens Concert Hall (Megaron), Athens, Greece, March 31, 2006.

- Nonlinear Fourier Transforms and the Imaging of the Brain, Zurich Colloquium in Mathematics, University of Zurich, Zurich, Switzerland, May 2, 2006.
- The Impact of Mathematics in Medicine, Annual Medical Meeting of Greece, Larissa, Greece, May 6, 2006.
- A New Formulation of Water Waves, Conference on Frontiers in Applied and Computational Mathematics, New Jersey Institute of Technology, Newark, May 15-16, 2006.
- The Dbar Method, Imaging and Integrability in 3+1 and 4+2, Conference on Integrable Systems, Random Matrices, and Applications in Honor of the 60th birthday of Percy Deift, Courant Institute of Mathematical Sciences, New York University, New York, USA, May 22 - 26, 2006.
- Statistics, Research and Responsibility, Athens Concert Hall (Megaron), Athens, Greece, May 30, 2006.
- Lax pairs: Synthesis Rather Than Separation of Variables, Conference in Honour of the 80th birthday of Peter Lax and Louis Nirenberg, Toledo, Spain, June 6-9, 2006.
- Integrable Nonlinear PDEs in 4+2 and 3+1 Dimensions, MASSEE International Congress on Mathematics, Cyprus, May 31-June 4, 2006.
- Mathematics and Imaging of the Brain, Ceremony for the Bodossaki Prize, Athens, Greece, July 14, 2006.
- The Process and Implications of a Mathematical Discovery, Conference of Thales and Friends Mathematical Society, Athens, Greece, June 16, 2006.
- Imaging of the Brain, Boundary Value Problems and Integrability in 4+2 and 3+1 Dimensions, International Workshop on Nonlinear Physics, Gallipoli, Italy, June 23-July 1, 2006.
- A New Formulation of Water Waves, 2nd Interdisciplinary Symposium on Mathematical Modeling in Modern Technologies and Economics, National Technical University of Athens, Athens, Greece, September 1-5, 2006.
- The Global Relation and Water Waves, Conference on Scattering Theory and Related Problems in Honor of the 60th birthday of G Dassios, University of Patras, Patras, Greece, September 2, 2006.

- Inverse Problems and Integrability for Linear and Nonlinear PDEs, International Conference on Modern Mathematical Methods in Science, Paros, Greece, September 7-9, 2006.
- Riemann-Hilbert Problems and Painlevé Equations, Two lectures at the Isaac Newton Institute for Mathematical Sciences, University of Cambridge, Cambridge, UK, September 14-15, 2006.
- Education and Basic Sciences, Conference Organised by the Moraitis School, Athens, Greece, November 3, 2006.
- Mathematics and Imaging, Opening Address of the Annual Meeting of the Greek Mathematical Society, Patras, Greece, November 24, 2006.
- Integrable Nonlinear Equations in 4+2 and 3+1, University of Cambridge, Cambridge, UK, January 30, 2007.
- The d-Bar Formalism and Applications to Imaging, Moving Boundaries and Integrability, in the Conference in Honor of the 60th Birthday of D.D. Holm, Ecole Polytechnique Federale De Lausanne, Lausanne, Switzerland, July 23, 2007.
- Science and Ideas of the Ancient Greeks, Delphoi, Greece, August, 2007.
- Integrability, Boundary Value Problems and Imaging, Conference in Numerical Analysis, Kalamata, Greece, September 3, 2007.
- Riemann-Hilbert and d-Bar Formalism, Imaging and Integrability, Conference on The Riemann-Hilbert Problem and Toeplitz Operators, Heriott-Watt University, Edinburgh, UK, September 6, 2007.
- The Diachronic Role of the Library, Laskaridis Library, Piraeus, Greece, October 2007.
- Spectral Analysis, Medical Imaging and Integrability in 4+2 and 3+1, London Analysis and Probabilities Seminar, Imperial College, London, UK, January 31, 2008.
- Mathematics, Medical Imaging and the Search for Consciousness, Academy of Athens, Athens, Greece, October 23, 2008.
- Mathematics and Innate Knowledge, Laskaridis Library, Piraeus, Greece, October 31, 2008.
- Mathematics, Medical Imaging and the Search for Consciousness, International Conference on Nanotechnology in Biomedicine, Larisa, Greece, November 30, 2008.

- Inversion of Certain Integrals and Integrability in 4+2 and 3+1 Dimensions, Workshop on Integrable Systems, University of Leeds, Leeds, UK, May 9, 2008.
- The d-Bar Method, Medical Imaging, Complexification, Harmonicity and Integrability in 3+1, International Conference, Nonlinear Waves - Theory and Applications, Beijing, China, June 9, 2008.
- Initial-Boundary Value Problems in Three Dimensions, International Conference, Nonlinear Waves - Theory and Applications, Beijing, China, June 10, 2008.
- Mathematics, Medical Imaging and the Search for Consciousness, Tsingua Global Vision Lecture, Tsingua University, Beijing, China, June 12, 2008.
- Magnetoencephaography for the 3-Shell Model: Distributed Current in Arbitrary, Spherical and Ellipsoidal Geometry, Workshop Geomathematics in Honor of Willi Freeden's 60th Birthday, University of Kaiserslautern, Kaiserslautern, Germany, July 3, 2008.
- Medical Imaging and Integrability in 4+2 and in 3+1 Dimensions, The fifth World Congress of Nonlinear Analysts, Orlando, USA, July 7, 2008.
- Electromagnetoencephalography for the 3-shell Model: Distributed Current in Arbitrary, Spherical and Ellipsoidal Geometry, 21st International Conference and Summer School, " Nonlinear Science and Complexity", Athens, Greece, July 21, 2008.
- An Effective Approach to Magnetoencephalography, 8th IEEE International Conference on BioInformatics and BioEngineering, Athens, Greece, October 10, 2008.
- Conformal Mappings, 1st Symposium "The Work of C. Karatheodory and its Modern Continuation", Athens, Greece, October 10, 2008.
- Innate Knowledge: From the Ancient Greeks to Neuroscience, 2nd World Congress on Controversies In Neurology, Athens, Greece, October 23, 2008.
- Mathematics and the Dynamics of the Brain, 2nd Workshop on Clinical Allergy, Larisa, Greece, October 24, 2008.
- Mathematics and Innate Knowledge: From the Ancient Greeks to Neuroscience, National Hellenic Research Foundation, Athens, Greece, November 11, 2008.

- Generalized Fourier Transforms, Inverse Problems and Integrability in 4+2, Department of Mathematics, University College London, London, UK, December 1, 2008.
- Generalized Fourier Transforms, Medical Imaging, and Integrability in 4+2 and 3+1, Institute H. Poincare, Paris, France, December 3, 2008.
- Integrability, Medical Imaging and Boundary Value Problems, International Conference on Applied Analysis and Scientific Computation, Shanghai Normal University, Shanghai, China, June 28, 2009.
- Boundary Value Problems for Linear and Nonlinear PDEs, Zhejiaung Normal University, Jinhua, China, June 22, 2009.
- Analytical Techniques for PET, SPECT, MEG and EEG and their Numerical Implementation, 16th International Conference on Digital Signal Processing, Santorini, Greece, July 6, 2009.
- Integrability in Multidimensions, Complexification and Quarternions, 7th International ISAAC Congress, Imperial College, London, UK, July 13, 2009.
- Integrability, Medical Imaging and Boundary Value Problems, 27th Colloquio Brasilero de Mathematica, IMPA, Rio de Janeiro, Brazil, July 28, 2009.
- Integrability and Medical Imaging, 5th International Conference, "Solitons, Collapses and Turbulence", Chernogolovka, Moscow, Russia, August 3, 2009.
- Innate Knowledge, Awareness, Unconscious and Functional Imaging Techniques, World Congress for Mental Health, Athens, Greece, September 3, 2009.
- Integrability, Medical Imaging and Boundary Value Problems, DAMTP Jubilee Celebration, University of Cambridge, Cambridge, UK, September 25, 2009.
- Complexification and Integrability, CMC Applied PDEs Days, University of Cambridge, Cambridge, UK, September 28, 2009.
- Analytical Methods for Certain Medical Imaging Techniques, 2nd International Workshop, GAIA Centre, Athens, Greece, October 21, 2009.
- Integrability, Medical Imaging and Boundary Value Problems, Massachusetts Institute of Technology, Cambridge, USA, November 16, 2009.

- Analytical Methods for Certain Medical Imaging Techniques, Harvard University, Cambridge, USA, November 17, 2009.
- Inverse Problems in Medical Imaging and Integrability in 3+1, Courant Institute of Mathematical Sciences, New York University, New York, USA, November 18, 2009.
- Integrability and Boundary Value Problems, University of Athens, Athens, Greece, November 25, 2009.
- Inverse Problems in Medical Imaging and Integrability in 3+1, University of Athens, Athens, Greece, November 26, 2009.
- Innate Knowledge: From Philosophical Positions of Ancient Greeks to Neuroscience, Royal Society of Medicine, London, UK, February 27, 2010.
- Integrable Nonlinear PDEs: Recent Progress and Open Problems, King's College, London, UK, March 10, 2010.
- Integrability, Medical Imaging and Boundary Value Problems, Boeing Distinguished Colloquia in Applied Mathematics, University of Washington, Seattle, USA, April 1, 2010.
- Integrability, Medical Imaging and Boundary Value Problems, California Institute of Technology, Pasadena, USA, April 9, 2010.
- A New Transform Method and Some of Its Numerical Implementations, ESF Mathematics Conference in partnership with EMS and ERCOM/INI, Highly Oscillatory Problems: From Theory to Applications, Isaac Newton Institute, Cambridge, UK, September 16, 2010.
- Analytical Methods for Certain Medical Imaging Techniques, Workshop on next Generation Numerical Methods for Computational Wave Propagation, University of Cambridge, Cambridge, UK, September 17, 2010.
- Mathematics and Medical Imaging, "Filekpaideftiki Etaireia", Athens, Greece, October 25, 2010.
- Analytical Algorithms for PET, Academy of Athens, Athens, Greece, November 25, 2010.
- The Spirit of Mathematics, "Athens Dialogues", Athens, Greece, November 26, 2010.
- Diachronic Role of Libraries, Zappeion, Athens, Greece, January 27, 2011.

- A Unified and Effective Method for Integrable Nonlinear PDES, ESF Mathematics Conference, Completely Integrable Systems and Applications, Vienna, Austria, July 4, 2011.
- Integrability, Medical Imaging and Boundary Value Problems, Technical University of Crete, Chania, Greece, July 28, 2011.
- Integrability, Medical Imaging and Boundary Value Problems, Maths Department Colloquia, Imperial College, London, UK, 23 February, 2012.
- Boundary Value Problems and Medical Imaging, Series of ten lectures, University of Patras, Patras, Greece, April-May, 2012.
- An Effective Method for Integrable Nonlinear PDEs on the Half-Line, ICMS Conference, "Boundary value problems for linear elliptic and integrable PDEs: theory and computation", Edinburgh, UK, May 28 - June 1, 2012.
- Asymptotic Periodicity for Integrable Nonlinear PDEs, "Patterns, turbulence and waves: explorations off the beaten track in nonlinear science", University of Warwick, Coventry, UK, July 9-10, 2012.
- Inverse Problems in Neuroscience, A series of lectures at the 2nd European Ph.D. School on "Mathematical Modeling of Complex Systems", Pescara, Italy, 16-28 July, 2012.
- Boundary Value Problems and Medical Imaging, Series of twelve lectures, Harvard University, Cambridge, USA, September 4-27, 2012.
- Linearity, Nonlinearity and Medical Imaging, Yale University, New Haven, USA, September 19, 2012.
- Mathematics, Innate Knowledge and Neuroscience, Harvard University, Cambridge, USA, September 27, 2012.
- Linearity, Nonlinearity and Medical Imaging, University of Notre Dame, Notre Dame, USA, September 28, 2012.
- Greeks, Mathematics and Neuroscience, University of Missouri-St. Louis, St. Louis, USA, October 1, 2012.
- Linearity, Nonlinearity and Medical Imaging, Baylor University, Waco, USA, October 2, 2012.
- Integrability, Medical Imaging and Boundary Value Problems, Reading Distinguished Colloquium, University of Reading, Reading, UK, October 16, 2012.

- Innate Knowledge: From Philosophical Positions of Ancient Greeks to Neuroscience, University of Cyprus, Nicosia, Cyprus, January 29, 2013.
- Innate Knowledge, Subconscious, and Mathematics, Hub Science Lecture, Athens, Greece, April 21, 2013.
- The Unified Method for the NLS Equation, in the Workshop on "Nonlinear Schrodinger Equation: Theory and Applications", Heraklion, Greece, May 20-24, 2013.
- Explicit Formulae for the Asymptotic Behavior of the Unknown Boundary Values for Integrable Nonlinear Evolution PDEs on the Half-Line, in the conference "Physics and Mathematics of Nonlinear Phenomena 2013", Gallipoli, Italy, June 22-29, 2013.
- Boundary Value Problems, Medical Imaging and Beyond, the keynote address in the International Conference on Mathemadical Modelling in Physical Sciences, IC-MSQUARE 2013, Prague, Czech Republic, September 1-5, 2013.
- Boundary Value Problems, Medical Imaging and Beyond, University of Bath, Bath, UK, February 7, 2014.
- Analytical Methods for Certain Medical Imaging Techniques in "Inverse Problems Meeting", Isaac Newton Institute, Cambridge, UK, February 13, 2014.
- Analytical Algorithms for PET, SPECT, MEG, and EEG in "Images Network Introductory Meeting", Cambridge, UK, February 29, 2014.
- From Aristotle to Darwin, Academy of Athens, Athens, Greece, April 3, 2014.
- Boundary Value Problems and Medical Imaging, Radon Colloquium, Johann Radon Institute for Computational and Applied Mathematics, Linz, Austria, April 7, 2014.
- Boundary Value Problems and Medical Imaging, Center for Applied Mathematical Sciences and Civil and Environmental Engineering Joint Colloquium, University of Southern California, Los Angeles, USA, May 8, 2014.
- The Interplay of the Concrete and General: From Mathematics to the Brain, The Distinguished Lägerstrom Lecture, Department of Aerospace, California Institute of Technology, Pasadena, USA, May 9, 2014.

- How We Learn: From the Ancient Greeks to Neuroscience, Cambridge Hellenic Society, Cambridge, UK, June 23, 2014.
- The Unified Transform and Boundary Value Problems, Three Lectures at the Isaac Newton Institute for Mathematical Sciences, "Theory of Water Waves 2014", Cambridge, UK, July, 2014.
- Initial-Boundary Value Problems in 1+1, and Solitons in 3+1, Invited Plenary Talk in the 2014 SIAM Conference on Nonlinear Waves and Coherent Structures, Cambridge, UK, August 11-14, 2014.
- The Unified Transform for the NLS with t-Periodic Boundary Conditions, 2014 SIAM Conference on Nonlinear Waves and Coherent Structures, Cambridge, UK, August 11-14, 2014.
- The Unified Transform and the Riemann-Hilbert Formalism, 2014 SIAM Conference on Nonlinear Waves and Coherent Structures, Cambridge, UK, August 11-14, 2014.
- The Interplay of the Concrete and General: From PDEs to Medical Imaging, Invited Plenary Talk in the NumAn2014, Conference on Numerical Analysis, Chania, Greece, September 2-5, 2014.
- Numerical Solutions for Linear Elliptic PDEs in Polygonal Domains via the Unified Transform, NumAn2014, Conference on Numerical Analysis, Chania, Greece, September 2-5, 2014.
- The Definitive Estimation of the Neuronal Current via EEG and MEG Using Real Data, NumAn2014, Conference on Numerical Analysis, Chania, Greece, September 2-5, 2014.
- The Unified Transform Method and Medical Imaging, AMCS Seminar, Computer, Electrical and Mathematical Sciences and Engineering, KAUST, Saudi Arabia, September 18, 2014.
- Analytical Reconstructions in PET-SPECT and MEG-EEG, LMS Inverse Day on "Tomographic Reconstructions from Boundary Data", University of Leeds, Leeds, UK, September 22, 2014.
- The Importance of Unconscious Processes, Hippocratic Oration, Hellenic Medical Society, London, UK, November 7, 2014.
- The Interplay of the Concrete and General: From PDEs to Medical Imaging, Invited Plenary Talk in the Conference on Mathematics and Its Applications, Kuwait City, Kuwait, November 14-17, 2014.
- Inverse Problems and Unconscious Processes, Inaugural Talk in a new series of biannual Colloquia in the University of Athens, Athens, Greece, April 28, 2015.

- Perception and the Importance of Unconscious Processes, Opening Talk at the 28th Annual Meeting of the European of the Musculo-Skeletal Oncology Society, Hilton Hotel, Athens, Greece, April 29, 2015.
- The Importance of Unification in Mathematics and Physics, Plenary Talk in an International Conference in Chemical Engineering for the 65th birthday of C. Vayenas, Patras, Greece, June 10, 2015.
- Benefaction and Esthetics, Aikaterini Laskaridis Foundation, Athens, Greece, November 24, 2015.
- Mathematics and Cognition, Geitonas School, Athens, Greece, March 3, 2016.
- Perception, Mathematics and Aesthetics, Plenary Talk at the Annual Meeting of the Greek-American Medical Society, Hilton Hotel, Athens, Greece, April 14, 2016.
- A Novel Analysis of the Classical Problem of Water Waves and Applications, IMA Conference on Turbulence, Waves and Mixing, in Honor of Lord Julian Hunt's 75th Birthday, King's College, Cambridge, UK, July 6, 2016.
- From Integrability to Medical Imaging and to the Asymtotics of the Riemann Zeta Function, Princeton University, Princeton, USA, October 6, 2016.
- The Inverse Problems of EEG and MEG, MRC, Cambridge, UK, December 6, 2016.
- Revisiting the Classics: Fourier, Laplace and Riemann, National and Kapodistrian University of Athens, Athens, Greece, March 14, 2017.
- The Unified Transform for the Elliptic PDEs and for Water Waves, Nottingham, UK, July 11, 2017.
- The Famous Riemann Hypothesis, Academy of Athens, Athens, Greece, November 23, 2017.
- Calculation, Perception and the Concept of Beauty, Eginition Hospital, Athens, Greece, December 6, 2017.
- Perception, Inverse Problems and the Essence of Mathematics, Pierce College, Athens, Greece, February 13, 2018.
- From the Wiener-Hopf Technique to the Lindelöf Hypothesis, Distinguished Lectures Series in Mathematics and Statistics, University of Massachusetts at Amherst, Amherst, USA, March 29, 2018.

- Which Part of the Neuronal Current Can Be Reconstructed via MEG and EEG, International Conference "50 years of MEG", Poros, Greece, April 20, 2018.
- Perception and the Essence of Mathematics, Athens Science Festival, Athens, Greece, April 24, 2018.
- From Acoustics to the Lindelöf Hypothesis, Landscapes in Mathematical Sciences, University of Bath, Bath, UK, May 14, 2018.
- Perception and Aesthetics, 11th Panionian Conference, Kefalonia, Greece, May 23, 2018.
- From Acoustics to the Lindelöf Hypothesis, Opening address at the First Congress of Greek Mathematicians (FCGM-2018), organized by the Hellenic Mathematical Society, Athens, Greece, June 25, 2018.
- Perception and the Essence of Mathematics, Democritus University of Thrace, Xanthi, Greece, June 27, 2018.
- From Acoustics to the Lindelöf Hypothesis, Brown University, Providence, USA, September 27, 2018.
- From Acoustics to the Lindelöf Hypothesis, Yale University, New Haven, USA, September 28, 2018.
- From Acoustics to the Lindelöf Hypothesis, Stanford University, Stanford, USA, October 3, 2018.
- From Acoustics to the Lindelöf Hypothesis, The Keller Colloquium in Computational Mathematics, California Institute of Technology, Pasadena, USA, October 8, 2018.
- Associations: Visual Perception and Reduction Versus Unification, Harvard University, Cambridge, USA, March 29, 2019.
- Asymptotics: The Unified Transform, a New Approach to the Lindelöf Hypothesis, and the Ultra-Relativistic Limit of the Minkowskian Approximation of General Relativity, Harvard University, Cambridge, USA, April 1, 2019.
- Asymptotics: The Unified Transform, a New Approach to the Lindelöf Hypothesis, and the Ultra-Relativistic Limit of the Minkowskian Approximation of General Relativity, University of California at Irvine, Irvine, USA, April 11, 2019.
- Asymptotics: The Unified Transform, a New Approach to the Lindelöf Hypothesis, and the Ultra-Relativistic Limit of the Minkowskian Approximation of General Relativity, University of Cyprus, Nicosia, Cyprus, May 14, 2019.

- Consciousness: From the Specific to the General, From Abstraction to Unification, Plenary Talk in the First Interdisciplinary Forum, University of Cyprus, Nicosia, Cyprus, May 14, 2019.
- The Fokas Method, 6th Conference on Mathematical Modeling of Complex Systems, Universita "G. d'Annunzio", Pescara, Italy, July 9, 2019.
- Mathematical Methods of Brain Imaging: New Results on the Analysis of PET, SPEST, MEG and EEG Techniques, 6th Conference on Mathematical Modeling of Complex Systems, Universita "G. d'Annunzio", Pescara, Italy, July 9, 2019.
- Associations: Visual Perception and Reduction Versus Unification, 6th Conference on Mathematical Modeling of Complex Systems, Universita "G. d'Annunzio", Pescara, Italy, July 9, 2019.
- Asymptotics: The Unified Transform, a New Approach to the Lindelöf Hypothesis, and the Ultra-Relativistic Limit of the Minkowskian Approximation of General Relativity, California Polytechnic State University, San Luis Obispo, September 27, 2019.
- Novel Mathematical and Computational Methods for Medical Imaging, Department of of Biomedical Engineering, University of Southern California, October 7, 2019.
- Consciousness and the problem of the free will: Discussion with George Paxinos, Metropolitan college, Athens, Greece, October 29, 2019.
- Novel Mathematical and Computational Methods for Medical Imaging, in the workshop "Inverse Problems", University of Manchester, Manchester, UK, December 12, 2019.
- The Unified Transform: from the Wiener-Hopf Technique to the Solution of the X-Periodic Problem for Nonlinear Integrable PDEs, web lecture series on "Nonlinear Waves and Coherent Structures", October 26, 2020.
- Psychological Trauma within the Continuum of Unconscious - Conscious Processes, WPA 2020 Thematic Congress on intersectional collaboration "Psychological Trauma: Global burden on mental and physical health", December 10, 2020.
- The Unified Transform: from the Wiener-Hopf Technique to the Solution of the X-Periodic Problem for Nonlinear Integrable PDEs, Annual Iranian Conference on Mathematical Physics, Tehran, Iran, December 18, 2020.

- The Grand Illusion, Helellic Philosophy Forum, May 6, 2021 (via zoom).
- The Unified Transform: from Linear PDEs to the Solution of the Periodic Problem for Nonlinear Integrable PDEs, for the celebration of Tassos Bountis's 70th birthday, University of Patras, July 23, 2021 (via zoom).
- Heat and Wave Equations Revisited: Beyond Fourier and d'Alembert, Department of Civil and Environmental Engineering, University of Southern California, Los Angeles, USA, October 7, 2021.
- Consciousness and the Essence of Mathematics, organised by the Hellenic Mathematical Society, October 15, 2021 (via zoom).
- Modelling Covid-19, presentation during the book-event of Zoumpourlis Vassilis, 2021.
- The Interdisciplinary Approach to Searching for the Truth, inaugural talk of the series Rencontres Interdisciplinaires Franco-Helleniques, Athens, Greece, November 3, 2021.
- The Fokas Method and some of its Applications, Department of Mathematics, University of Ioannina, Ioannina, Greece, November 24, 2021 (via zoom).
- Perception as the Solution of an Inverse Problem, in the Colloquium series of the European Academy of Science and Art, "Science meets Art Art", March 4, 2022.
- Three different lectures withing the framework of the Gentry Lecture Series, Wake Forest University, Winston-Salem, USA, Spring 2022.
- The Grand Illusion and the two "Big Bangs" of Mental Evolution,Hellenic Diaspora Academic Association, Distinguished Lecturer Series, March 15, 2022.
- Music and the Unconscious, 7th International Conference of the International Association for Music and Medicine, March 28, 2022 (via zoom).
- The Unified Transform and Water Waves, A conference dedicated to the retirement of Makis Athanassoulis, Athens, Greece, July 4, 2022 (via zoom).
- The Role of Mathematics in Understanding Nature and Ourselves, 28th Summer School "Dynamical Systems and Complexity" (dedicated to the 70th birthday of Professor Athanassios Fokas), Chania, Greece, July 23, 2022.

- The Neuronal Origin of the Tendency to Form Networks, presentation in the Inaugural event of the Ionian Hall of Science, Kefalonia, Greece, August 12, 2022.
- The Continuum of Unconscious and Conscious Processes and the Vital Role of Psychiatry, 5th Panhellenic Congress of Psychosomatic Medicine, Nafplio, Greece, October 21, 2022.
- The Workings of the Brain: Ways of Comprehending, the Pelican Invited Talk, University of Missouri, Saint Louis, USA, September 11, 2023.
- Unification versus Reduction: from the Unified Transform to Asymptotics, Invited talk at the Annual Meeting of the European Academy of Sciences, Madrid, Spain, October 24, 2023.
- From Homeostasis to Artificial Intelligence, one of the two Plenary talk delivered at the 3rd Congress of the European Association of Professors Emeriti, "The Capital of Knowledge", University of East London, London, UK, April 3-5, 2024.
- Ways of Comprehending, Paediatric Conference, Delphi, Greece, April 6-9, 2024.
- The Unified Transform Method: An Unexpected Extension of Classical Works of d'Alembert, Fourier and Laplace, Fudan University, Shanghai, China, May 23, 2024.
- The De-mystification of Complex Variables, Westlake University, Hangzhou, China, May 24, 2024.

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