CURRICULUM VITAE

PERSONAL DATA

Name: Myron K. Grammatikopoulos.
Nationality: Hellenic.
Date of Berth: November 14th, 1938 (By mistake I have been registered after World War II as born in November 8th, 1935).
Place of Birth: Gagra of Abkhazia, Republic of Georgia.
Marital Status: Married, four sons (three in life).
Current Academic Affiliation: Department of Mathematics, University of Ioannina, 451 10 Ioannina, Hellas (Greece).
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SCIENTIFIC LEVELS

-Diploma in Mathematics, Faculty of Mathematics, Pedagogikal Institute of Chimkent (Branch of the University of Kazakhstan), 1961, and Department of Mathematics, Aristotle University of Thessaloniki, 1967.

-Ph.D. in Mathematics (first dissertation, directed by Professors V.A. Staikos and Y.G. Sficas), School of Physics and Mathematics, University of Ioannina, Ioannina, 1975.

-Docent Thesis in Mathematics (second dissertation, directed by Professors V.A. Staikos and Y.G. Sficas), School of Physics and Mathematics, University of Ioannina, Ioannina, 1981.

LANGUAGES (used in Research)

- Hellenic, Russian, and English.

FELLOWSHIPS

-NATO Research Grant, The Ministry of Coordination of Greece, 1978-1979.

-Biological and Physical Sciences Research Institute Grant, Mississippi State University, Spring 1979.

EXPERIENCE, ACADEMIC POSITIONS

-High School Teacher: in Kazakhstan: 1959-1965; in Greece: 1967-1972.

-Teaching Assistant, Department of Mathematics, University of Ioannina,1972-1975.

-Lecturer, Department of Mathematics, University of Ioannina,1975-1981.

-Visiting Researcher, Department of Mathematics and Statistics, Mississippi State University, 1978-1979.

-Docent-Assistant Professor, Department of Mathematics, University of Ioannina,1981-1985.

-Visiting Assistant Professor, Department of Mathematics, University of Rhode Island,1984-1985.

-Associate Professor, Department of Mathematics, University of Ioannina,1985-1986.

-Full Professor, Department of Mathematics, University of Ioannina, since 1986.

-Visiting Professor, Center of Mathematics, Technical University of Rousse,March-April of 1989-1990, and September-October of 1990-1991.

-Visiting Professor, Center of Mathematics, Technical University of Rousse,The Academic Year 1991-1992.

-Elected Professor, Center of Mathematics, Technical University of Rousse, Fall Semester of 1991-1992.

-Visiting Professor, Center of Applied Mathematics and Informatics, University of Rousse,February-August of 1995-1996.

RESEARCH INTERESTS

Research in various aspects of Qualitative Theory of ordinary, functional, neutral, and partial differential equtions.

My research work is frequently cited by authors of papers (in over than 200 cases). For monographs on this subject, see in the section PUBLICATIONS two last pages.

REFEREE (1975-present)

-The Bulletin of the Greek Mathematical Society.

-International Journal of Scienses and Engineering.

-Radovi Matematicki.

-Aequationes Mathematicae.

-The Journal of the Australian Mathematical Society.

-Journal of the Mathematical Analysis and Applications.

-Mathematica Slovaca.

-Proceedings of the Edinburgh Mathematical Society.

-Publications Matematiques.

REVIEWER (1975-present)

-Mathematical Reviewes.
-Zentralblatt MATH.

MEMBERSHIPS

-The Greek Mathematical Society, since 1973.

-The American Mathematical Society, 1975-1983.

MEMBER OF COMMITTEES OF CANDIDATES FOR DOCTORAL THESIS

-M.R. Kulenovic, Prilozi Teoriji Oscilacija Obicnih i Parcijalnih Diferencijalnih Nejednacina Drugog Reda, Doktorska Disertacija (Contribution to Oscillation Theory of Ordinaty and Partial Differential Inequalities of Second Order, Ph.D.), University of Sarajevo, Sarajevo, 1981.

-Yumei Wu, Ταλάντωση Δυναμικών Συστημάτων, Διδακτορική Διατριβή (Oscillation of Dynamic Systems, Ph.D.), University of Ioannina,Ioannina, 1992 .

REGULAR OR EXTERNAL REFEREE, CONSULTANT OR MEMBER OF THE JURIES FOR DOCTORAL THESIS OR PROFESSORSHIPS

In more than 20 cases in Greece, Bulgaria, USA, Former USSR, and Former Yugoslavia.

CONFERENCES ATTENDED, SCHOOLS VISITED, SCIENTIFIC COLLABORATION

Since 1973, I have attended more than 50 Conferences and have visited more than 40 Schools (as invited speaker or researcher) in Albania, Austria, Bulgaria, Greece Poland. USA, Former USSR, and Former Yugoslavia.

Among them, Academies of Sciences of Bulgaria, Republic of Georgia, Russia and Ukraine.

Moreover, I have a permanent scientific collaboration with more than 60 researchers from different Universities around the World.

ADMINISTRATIVE POSTS

- **Member of the Committee** for the development of Library of the Department of Mathematics, University of Ioannina, 1975-1990, and 1993-1994.

- **Member of the Committee** of the non-referee periodical "Technical Report" issue of the Department of Mathematics, University of Ioannina, 1978-present.

- **Deputy Representative** of the Department of Mathematics in the Senate of The University of Ioannina,1983-1985.

- **Deputy Chairman** of the Department of Mathematics, University of Ioannina, 1989-1991.

- **Director** of theSection of the Mathematical Analysis, Department of Mathematics, University of Ioannina, 1992-1995.

- **Member of the Commission** for recognition of Foreign Degrees in Mathematics, Athens, 1990-2000.

(This Commission belongs to the Organization DI.K.A.T.S.A., which is controled by the Ministry of Education and Religious Affairs of Greece with mission the recognition and equivalence of Academic Degrees awarded by Universities abroad.)

-**Deputy Chairman** of the Department of Sciences of Art, University of

Ioannina, 1999- 2003.

PARTICIPATION IN TEMPUS JEPs, IN SOCRATES/ERASMUS AND IN OTHER PROGRAMS

- *TEMPUS* JEP GRANT: 476.400 ECU, **No JEP-4016** for the period from 01-09-1992 to 31-08-1995.

-As **Contractor** of this JEP entitled:

"Creating a Department of Applied Mathematics and Informatics".

Participating Institutions:

University of Ioannina, Ioannina (GR);

Technical University of Rousse, Rousse (BG);

Universita degli Studi di Pavia, Pavia (I);

Brunel University,Uxbridge, West-London (UK).

- *TEMPUS PHARE* JEP GRANT: 432.950 ECU, **No S_JEP-09363** for the period from 01-09-1995 to 31-08-1998.

-As **Coordinator** of this JEP entitled:

"Restructuring and Developing Mathematics Departments".

Participating Institutions:

University of Ioannina, Ioannina (GR);

University of Tirana, Tirane (Alb);

Universita degli Studi di Trento, Trento (I);

Eqerem Cabej University of Gjirocastra, Gjirokastre (Alb).

- *TEMPUS* JEP GRANT: 334.800 ECU, **No S_JEP-11392** for the period from 01-09-1965 to 31-08-1999.

-As **a member** of this JEP entitled:

"Restructuring degree courses in computing".

Participating Institutions:

Technical University of Sofia;

TU Sofia/Branch Plovdiv;

Technical University of Varna;

Technical University of Gabrovo;

University of Rousse "A. Kanchev" **(Coordinator)**;

Bulgarian Academy of Sciences;

Ministry of Education and Sciences - Bulgaria;

University of Plymouth **(Contractor)**;

John Moors University - United Kingdom;

FHTW Berlin - Germany;

University of Pavia - Italy;

University of Ioannina - Greece.

- *SOCRATES/ERASMUS PROGRAM* between the University of Ioannina and:

a) the University of Rousse, BG ROUSSE, 1999-2003;

b) the Technical University of Sofia, BG SOFIA, 2001-2003;

c) the Technical University of Sofia/Branch Sliven, BG SLIVEN, 2002-2003.

-As **Institutional Coordinator** of this Program.

- *EUROPEAN COMPUTING EDUCATION AND TRAINING PROGRAM*

Participate more than 60 European Universities.

Coordinator of this Program is the University of Rousse.

-As **a member** of the Scientific Committee and as **a representative** of the University of Ioannina, since 2000.

HONORS AND AWARDS

- **Silver Medal** in Secondary School, High School of Temirlanovka (Tamerlanovka), Kazakhstan, 1956.

- **Special Award** in Higher Education, Pedagogical Institute of Shimkent (Chimkent), Kazakhstan, 1961.

- **Doctor Honoris Causa** University of Rousse, Bulgaria, 1995.

- **Twentieth Century Achievement Award,** Five Hundred Leaders of Influence, Board of the American Biographical Institute, 1995.

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RESEARCH WORK
GENERAL REMARKS

My main research interests are in the area of Oscillation Theory of Ordinary and Functional Differential Equations (DEs) with Deviating Arguments, that is to say, equations of the form

$$(E) \qquad x^{(n)}(t) = F[t;\, x^{(m_1)}(t-\tau_1),...,x^{(m_s)}(t-\tau_s)], \quad t \geq t_0,$$

where n and m_i, i = 1,2,...,s are nonnegative integers, $\tau_i \in \mathbf{R}$, i = 1,2,...,s and x, F may be vectors. Set m = max $\{m_i: i = 1,2,...,s \}$. Then Eq. (E) is said to be of the:

- retarded (delay) type, if m < n,
- advanced type, if m > n, and
- neutral type, if m = n.

Moreover, Eq. (E) has:

- retarded (delay) arguments, if $\tau_i \geq 0$,   i = 1,2,...,s
- advanced arguments, if $\tau_i \leq 0$,   i = 1,2,...,s and
- mixed arguments, if there is $s_1 \in \{1,2,...,s\text{-}1\}$ such that

$\tau_i \geq 0$ for i = 1,2,...,s_1 and $\tau_i \leq 0$ for   i = s_1+1,s_1+2,...,s.

The deviating arguments may depend on time t or even depend on the solution of Eq. (E), whereupon the type of deviation of the arguments may change depending on time or on solution.

It should be pointed out that deviating arguments, in some cases, do not affect the oscillatory character of the solutions of differential equations under consideration, while in some other cases they either cause (generate) oscillations or destroy (ruin) them. Consequently, it is interesting to investigate phenomena of this kind in order to chose the mathematical model of real systems, whose oscillatory character depends on the deviating arguments of the equations in question.

In a number of my papers I study retarded type DEs, the derivatives of which contain a continuous function r defined on an interval [t_r,∞). The presence of the function r is justified by the fact that these equations constitute generalizations of the well known Emden-Fowler and Thomas-Fermi equations which, as they appear in applications, contain functions of the type r. An occurrence of the function r could be, for example, a cause for appearance of terms, in DEs under consideration, which cause forced oscillations. The obtained results are interesting not only from the theoretical aspect, but also from the aspect of applications.

Indeed, the role of these equations, for example, in the relativistic electrodynamics and other natural sciences, is very important.

An other important topic is the problem of oscillatory and asymptotic behavior of the solutions of neutral differential equations (NDEs) with deviating arguments. This

problem is interesting both from the theoretical and practical aspect. In fact, NDEs have applications in electric networks containing lossless transmission lines. Such networks arise, for example, in high speed computers, where the lossless transmission lines are used to interconnect switching circuits. Second order NDEs appear in the study of vibrating masses attached to an elastic bar and also, as the Euler equation, in some variational problems etc.

In general, the study of NDEs presents complications which are unfamiliar to non-neutral type differential equations. Indeed, it has been
proved that even though the characteristic roots of a NDE may all have negative real parts, it is still possible for this equation to have unbounded solutions. Furthermore, the oscillatory character of the solutions of a NDE is determined by the roots of the corresponding characteristic equation which is in contrast with the fact that the stability character is not determined by the characteristic roots.

In my work techniques and methods are developed which have been adopted by a number of researchers in this area. Also, it should be pointed out that results obtained for NDEs with constant coefficients and constant deviations are crucial with respect to drawing conclusions concerning NDEs of the same form where the coefficients and deviations are functions. For this reason, the large number of essential references to my work is not surprise.

Beyond the above areas, I am interested in applications of Partial Differential Equations (PDEs). The results obtained in this direction concern the boundary value problems (BVPs) for some special type PDEs (for example, wave equations, etc.), the problem of existence and uniqueness of solutions of this type of equations and the possibility to treat practical problems appearing in Technology, etc.

As a result of the analysis of my research work, one can see that
some of the main topics, which are treated in it, are the following:
- Establishing criteria (necessary and sufficient conditions) for oscillation (non-oscillations) of all solutions of DEs under consideration.
- Establishing criteria for existence of oscillatory (non-oscillatory) solutions of DEs with some asymptotic property.
- Obtaining sufficient conditions for oscillation (non-oscillation) of all solutions of equations in question.
- Finding the relation between oscillation and other qualitative
    properties such as boundness, convergence to zero etc.
- Investigating the oscillatory and asymptotic properties of the non-oscillatory solutions of DEs with forcing or discontinuous terms.
- Investigating the oscillatory phenomena caused by deviating arguments.
- Classification of all solutions of DEs under consideration with respect to their behavior at infinity.
- Other topics: BVPs for PDEs, etc.

PUBLICATIONS

1. О колеблемости ограниченных решений дифференциальных
   уравнений с возмущенными аргументами.
   М.К. Грамматикопулос, Чехослов. Мат. Ж. 27(1977),186-20.

   (On the oscillation of bounded solutions of differential equations with deviating
   arguments.
   M. K. Grammatikopoulos, *Czech. Math. J.* 27(1977), 186-200.)

2. Ταλαντωτική και ασυμπτωτική συμπεριφορά των διαφορικών εξισώσεων με
   εκτρεπόμενα ορίσματα.
   Μ. Κ. Γραμματικόπουλος, Διδακτορική Διατριβή, *Πανεπιστήμιο Ιωαννίνων,* 1975,
   1-75.

   (Oscillation and asymptotic behavior of differential equations with deviating
   arguments.
   M. K. Grammatikopoulos, Ph. D., *University of Ioannina*, 1975, 1-75.)

3. Oscillatory and asymptotic behavior of differential equations with deviating
   arguments.
   M. K. Grammatikopoulos, *Hiroshima Math. J.* 6(1976), 31-53.

4. On the types of nonoscillatory solutions of differential equations with deviating
   arguments.
   M. K. Grammatikopoulos, Y. G. Sficas and V. A. Staikos, *Bull Fac. Sci. Ibaraki
   Univ., Math.*, 9(1977), 65-79.

5. Asymptotic and oscillatory criteria for retarded differential equations.
   M. K. Grammatikopoulos, Y. G. Sficas and V. A. Staikos, *J. Math. Anal. Appl.*
   63(1978), 591-605.

6. О влиянии отклоняющихся аргументов на поведение ограниченных
    решений нелинейных дифференциальных уравнений.
   М.К. Грамматикопулос, Украин. Мат. ж. 30(1978),462-473.

   English translation by Academic Press:
   Influence of deviating arguments on the behavior of the bounded solutions of
   nonlinear differential equations.
   M. K. Grammatikopoulos, *Ukrain. Math.J.* 30(1979), 357-366.

7. Oscillatory properties of strongly superlinear differential equations with deviating
   arguments.
   M. K. Grammatikopoulos, Y. G. Sficas and V. A. Staikos, *J. Math. Anal. Appl.*
   67(1979), 171-187.

8. A criterion for the existence of bounded nonoscillatory solutions for nonlinear
   retarded differential equations.
   M. K. Grammatikopoulos, *Ann. Mat. Pura Appl.* 120(1979), 25-34.

   Correction on the paper: "A criterion for the existence of bounded nonoscillatory

solutions for nonlinear differential equations".
 M. K. Grammatikopoulos, *Ann. Mat. Pura Appl.* 125(1980), page 391.

9.   On the existence of oscillatory solutions of nonlinear differential equations with retarded argument.
M. K. Grammatikopoulos, Proc. of International Congress of Applied Mathematics, *B.U.M., Thessaloniki,* August, 1976, 217-238.

10.   Asymptotic and oscillatory criteria for nonlinear differential equations with deviating arguments.

M. K. Grammatikopoulos, Technical Report N° 102, Ioannina, May 1977, and Short Conference on Differential Equations, Mississippi State, *Mississippi*, January, 1979, 1-25.

11.   Oscillation theorems for second order ordinary differential equations with alternating coefficients.

M. K. Grammatikopoulos, An. Stiint. Univ. *"Al. I. Cuza" Iasii,* Sect. Ia Mat. (N.S.) 26(1980), 67-76 .

12.   Oscillatory and asymptotic behavior of higher order differential equations with deviating arguments.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Indian J. pure appl. Math.* 16(1985), 225-231.

13.   Growth and oscillatory behavior of solutions of a differential equation with a deviating argument.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Funk. Ekvac.* 23(1980), 279-287.

14.   Asymptotic and oscillatory behavior of superlinear differential equations with deviating arguments.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *J. Math. Anal. Appl.* 75(1980), 134-148.

15.   Oscillatory behavior of differential equations with deviating arguments.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Dokl. Bolg. Akad. Nauk* 33(1980), 1443-1446.

16.   On the behavior of solutions of generalized Emden-Fowler equations with deviating arguments.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Hiroshima Math. J.* 12(1982), 1-10.

17.   Oscillatory and asymptotic properties of solutions of generalized Thomas-Fermi equations with deviating arguments.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *J. Math. Anal. Appl.* 84(1981), 519-529.

18.   Nonoscillation theorems for functional differential equations of arbitrary order.
J. R. Graef, M. K. Grammatikopoulos Y. Kitamura, T. Kusano, H. Onose and P. W. Spikes, *Internat. J. Math. and Math. Sci.* 7(1984), 249-256.

19.   On the asymptotic behavior of second order differential inequalities with

alternating coefficients.
M. R. Kulenovic and M. K. Grammatikopoulos, *Math. Nachr.* 98(1980), 317-327.

20. On the nonexistence of L_2-solutions of n-th order differential equations.
M. K. Grammatikopoulos and M. R. Kulenovic, *Proc. Edinburg Math. Soc.*
24(1981), 131-136.

21. Classification of solutions of functional differential equations of arbitrary order.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Bull. Inst. Math. Acad.*
Sinica 9(1981), 517-532.

22. Συμβολή στη μελέτη της ταλαντωτικής και ασυμπτωτικής συμπεριφοράς μη
γραμμικών διαφορικών ανισοτήτων και εξισώσεων.
Μ. Κ. Γραμματικόπουλος, Πραγματεία για Υφηγεσία, *Πανεπιστήμιο Ιωαννίνων*,
Ιωάννινα, 1981, 1-117.

(A contribution to the study of oscillatory and asymptotic behavior of nonlinear
differential inequalities and equations.
M.K. Grammatikopoulos, Docent Dissertation,
University of Ioannina,1981, 1-117.)

23. Колебательное и асимптотическое поведение нелинейных
дифференциальных неравенств и уравнений с отклоняющимися
аргументами.
М.Р. Куленович и М.К. Грамматикопулос, Украин. Мат. Ж. 6
(1984), 309-316.

English translation by Academic Press:
Oscillation and asymptotic behavior of solutions of nonlinear differential
inequalities and equations with deviating arguments.
M.R. Kulenovic and M.K. Grammatikopoulos, Ukrain. Math. J. 6
(1985), 277-283

24. Устойчивость асимптотического поведения решений нелинейных
дифференциальных неравенств относительно запаздывания аргумента.
М.Р. Куленович и М.К. Грамматикопулос, Украин. Мат. Ж. 36
(1984),437-443.

English translation by Academic Press:
Stability of the asymptotic behavior of solutions of nonlinear differential
inequalities relative to a lag in the argument.
M.R. Kulenovic and M.K. Grammatikopoulos, Ukrain. Math. J. 36
(1985), 352-358

25. On the decay of oscillatory solutions of a forced higher order functional differential
equation.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Math. Nachr.* 117(1984),
141-153.

26. On the positive solutions of a higher order functional differntial equation with a
discontinuity.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Internat. J. Math. and*

Matl. Sci. 5(1982), 263-373.

27. Positive solutions of an n-th order differential equation with a deviating argument having a discontinuity in the nonlinear term.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Fasc. Math.* 14(1985), 41-47.

28. Asymptotic properties of solutions of generalized Emden-Fowler equations.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Dynamical Systems II*, Proc, of a Univ. of Florida Internat. Symposium, *Academic Press*, 1982, p.p. 529-533.

29. On the asymptotic behavior of the posistive solutions of a differential equation with a discontinuous nonlinear term.
M. K. Grammatikopoulos, J. R. Graef and P. W. Spikes, Differential Equations, Proc. of UAB Conference, *North-Holland Math. Studies, North-Holland Publ., Amsterdam,* Vol. 92(1984), 237-240.

30. Oscillatory and asymptotic properties of first order differential equations and inequalities with a deviating argument.
M. K. Grammatikopoulos and M. R. Kulenovic, *Math. Nachr.* 123(1985), 7-21.

31. Some comparison and oscillation results for first order differential equations and inequalities with a deviating argument.
M. R. Kulenovic and M. K. Grammatikopoulos, *J. Math. Anal. Appl.* 131(1988), 67-84.

32. First order functional differential inequalities with oscillating coefficients.
M. R. Kulenovic and M. K. Grammatikopoulos, *J. Nonlinear Analysis-TMA* 8(1984), 1043-1054.

33. Поведение дифференциальных уравнений с малым запаздыванием и постоянными точками в аргументе.
Я.Г. Сфикас и М.К. Грамматикопулос, Укр. Мат. Ж. 37(1985), 327-335.

   (Behavior of differential equations with small delays and fixed points in the arguments.
Y. G. Sficas and M. K. Grammatikopoulos, *Ukrain. Math. J.* 37(1985), 327-335).

34. Oscillations of first order neutral delay differential equations.
M. K. Grammatikopoulos, E. A. Grove and G. Ladas, *J. Math. Anal. Appl.* 120 (1986), 510-520.

35. Oscillation and asymptotic behavior of neutral differential equations with deviating arguments.
M. K. Grammatikopoulos, E. A. Grove and G. Ladas, *Appl. Analysis* 22(1986), 1-19.

36. Oscillation and asymptotic behavior of second order neutral differential equations.
M. K. Grammatikopoulos, G. Ladas and A. Meimaridou, *Annali Mat. Pura ed Applicata* 148(1987), 29-40.

37. Oscillations of second order neutral delay differential equations.
M.K.Grammatikopoulos, G. Ladas and A. Meimaridou, *Radovi Mat.*1(1985), 267-274.

38. Necessary and sufficient conditions for oscillation of delay equations with constant coefficients.
M. K. Grammatikopoulos, G. Ladas and Y. G. Sficas, *Czech. Math. J.* 37(1987), 262-270.

39. Oscillation and asymptotic behavior of neutral equations with variable coefficients.
M. K. Grammatikopoulos, G. Ladas and Y. G. Sficas, *Radovi Mat.* 2(1986), 279-303.

40. Oscillation and asymptotic behavior of higher order neutral equations with variable coefficients.
M. K. Grammatikopoulos, G. Ladas and A. Meimaridou, *Chin. Ann. of Math.* 9B(1988), 322-338.

41. Oscillation and asymptotic behavior of second order neutral differential equations with deviating arguments.
M. K. Grammatikopoulos, E. A. Grove and G. Ladas, *Canadian Math. Soc.* Conference Proceedings, 8(1987), 153-161.

42. Aymptotic properties of solutions of neutral delay differential equations of second order.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Radovi Mat.* 4(1988), 133-149.

43. Necessary and sufficient conditions for oscillations of neutral equations with several coefficients.
M. K. Grammatikopoulos, Y. G. Sficas and I. P. Stavroulakis, *J. Differential Equations* 76(1988), 294-311.

44. Behavior of the nonoscillatory solutions of first order neutral delay differential equations.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Proccedings of the Equadiff Conference, Dekker*, New York, 1989, 265-272.

45. Necessary and sufficient conditions for oscillations of neutral equations with deviating arguments.
M. K. Grammatikopoulos and I. P. Stavroulakis, *J. London Math. Soc.* 41(1990), 244-260.

46. Asymptotic and oscillatory behavior of solutions of first order nonlinear neutral

delay differential equations.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *J. Math. Anal. Appl.* 155(1991), 562-571.

47. On the asymptotic behavior of solutions of a second order nonlinear neutral delay differential equation.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *J. Math. Anal. Appl.* 156(1991), 23-36.

48. Oscillations of neutral differential equations.
M. K. Grammatikopoulos and I. P. Stavroulakis, *Radovi Mat.* 7(1991), 244-260.

49. Oscillations of higher order neutral differential equations.
S. J. Bilchev, M. K. Grammatikopoulos and I. P. Stavroulakis, *J. Austral. Math. Soc.*, Serie A, 52(1992), 221-284.

50. Oscillation of second order neutral differential equations with deviating arguments.
S. J. Bilchev, M. K. Grammatikopoulos and I. P. Stavroulakis, *Contemporary Mathematics* 129(1992), 1-21.

51. On the behavior of solutions of a first order nonlinear neutral delay differential equation.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Applicable Analysis* 40(1991), 111-121.

52. Oscillation criteria in higher-order neutral equations.
S. J. Bilchev, M. K. Grammatikopoulos and I. P. Stavroulakis, *J. Math. Anal. Appl.* 183(1994), 1-24.

53. Asymptotic behavior of nonoscillatory solutions of neutral differential equations of arbitrary order.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Nonlinear Analysis* 21(1993), 23-42.

54. Some results on the asymptotic behavior of the solutions of a second order nonlinear neutral delay equation.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Contemporary Mathematics* 129(1992), 105-114.

55. Oscillation results for higher order nonlinear delay equations with periodic coefficients.
J. R. Graef, M. K. Grammatikopoulos and P. W. Spikes, *Pitman Research Notes in Mathematics Series 272, Ordinary and delay differential equations*, Longman Scientific and Technical, New York, 1992, 39-42.

56. Oscillatory properties of neutral delay differential equations of the second order with deviating arguments. M.K.Grammatikopoulos and P.Marusiak, *Arch.Math.* 31(1995), 29-36.

57. First order nonlinear neutral differential inequalities with oscillating coefficients.
M.K. Grammatikopoulos and P. I. Rashkov, University of Ioannina, *Adv.Math. Sci. Appl.* 6(1996), 653-688.

58. Structural solution of the Shrödinger boundary equation problem.
PhilipPhilipov, Nikolai Shopolov, Kamen Ishtev and Myron Grammatikopoulos, *Proceed. of the XXII Summer School, Sozopol (Bulgaria),* September 14-21,1996.

59. On the periodic solutions of nonlinear neutral delay differential   equations.
M.K. Grammatikopoulos and S.A.Stepan, Univrsity of Ioannina, *J. of Dynamic Systems and Appl*. 6(1997), 197-206.

60. An oscillation criterion for functional differential equations via Laplace transform.
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