COLLEGE OF ARTS AND SCIENCES
Mathematics Department
Curriculum Vitae

GENERAL DATA

NAME: Athanassios G. Kartsatos
USF EMPLOYMENT: September 1971, Assistant Professor
PRESENT RANK: Full Professor
TENURED: September 1976

EDUCATION

<table>
<thead>
<tr>
<th>Institution</th>
<th>Field of Study</th>
<th>Degree, Date</th>
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<tbody>
<tr>
<td>University of Athens, Greece</td>
<td>Mathematics</td>
<td>Diploma, 1965</td>
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<tr>
<td>University of Athens, Greece</td>
<td>Mathematics</td>
<td>Doctorate, 1970</td>
</tr>
</tbody>
</table>

EMPLOYMENT

University of South Florida: Professor, 1978-
University of South Florida: Associate Professor, 1973-78
University of South Florida: Assistant Professor, 1971-73

AREAS OF SPECIALIZATION

Nonlinear Functional Analysis, Evolution Equations in Abstract Spaces,
Nonlinear Accretive and Monotone Operator Theory, Nonlinear Control Theory.
CURRENT USF COMMITTEES

Member of the Graduate Committee of the Department of Mathematics.

GRANTS RECEIVED

National Science Foundation (funded)/National Research Council Office for Central Europe and Eurasia (administered) COBASE Grant for Collaboration in Basic Science and Engineering (with Professor Igor V. Skrypnik, member of the Ukrainian Academy of Sciences). Title of Project: “Solvability of Essentially Nonlinear Parabolic Initial-Boundary Value Problems and Problems Involving Nonlinear Maximal Monotone and M-Accretive Operators”. Year 1996.

AWARDS

USF Provost’s Pool Outstanding Professor award, 1996.
Distinguished Teacher Award of the Florida Section of the Mathematical Association of America, 2003.

CREATIVE ACTIVITIES


REFEREE: Numerous Mathematical Journals.

REVIEWER: Mathematical Reviews.

ARTICLES IN REFEREED PUBLICATIONS


[67] Mapping theorems involving compact perturbations and compact resolvents of nonlinear operators in Banach spaces, *Journal of*
Mathematical Analysis and Applications, 80 (1981), 130-146.


[79] [With Prof. M. E. Parrott] A simplified approach to the existence and stability problem of a functional evolution equation in a general Banach


[100] [With Prof. D. R. Kaplan] Ranges of sums and the control of nonlinear


[109] [With Prof. Z. Guan] Ranges of perturbed maximal monotone and $m$-accretive operators in Banach spaces, *Transactions of the American


[129] [With Prof. I. V. Skrypnik] Topological degree theories for densely defined mappings of type (S+), *Advances in Differential Equations*, **4** (1999), 413-456.


[140] [With Dr. Z. Guan and Prof. I. V. Skrypnik] Ranges of densely defined generalized pseudomonotone perturbations of maximal monotone operators. Journal of Differential Equations, 188 (2003), 332-351.


[144] [With Prof. V. Kurta] On blow-up results for solutions of inhomogeneous evolution equations and inequalities. II. Differential Integral Equations, 18 (2005), 1427-1435.


[152] [With Dr. Ibrahimou] The Leray-Schauder approach to the degree theory for (S+)-perturbations of maximal monotone operators in separable reflexive Banach spaces, *Nonlinear Analysis*, 70 (2009), 4350--4368.


[158] [With Prof. D. R. Adhikari] Invariance of domain and eigenvalues for perturbations of densely defined linear maximal monotone operators, submitted.


[160] [With T. Asfaw] Variational inequalities and inclusions for monotone-type operators in reflexive separable Banach spaces, Very close to completion.

BOOKS REFERRING TO THE AUTHOR’S WORK

[1] G. E. O. Giacaglia,  

[2] S. R. Bernfeld and V. Lakshmikantham,  


[4] V. Lakshmikantham and S. Leela, 

[5] H. O. Fattorini, 

[6] N. H. Pavel, 

[7] G. F. Webb, 

[8] N. H. Pavel, 

[9] G. S. Ladde, V. Lakshmikantham and B. G. Zhang, 

[10] K. Goebel and W. A. Kirk, 


[13] **S. Mitrinovic, J. E. Pecaric and A. M. Fink,**  

[14] **J. Klamka,**  

[15] **W. V. Petryshyn,**  

[16] **R. Koplatadze,**  

[17] **J. Wu,**
Theory and Applications of Partial Functional Differential Equations, 

[18] U. Elias, 
Oscillation Theory of Two-term Differential Equations, Kluwer 

[19] S. Hu and N. S. Papageorgiou, 
Handbook of Multivalued Analysis, Kluwer Academic Publishers, 
Boston, 1997.

[20] D. H. Hyers, G. Isac, T. M. Rassias, 
Topics in Nonlinear Analysis & Applications, World Scientific 

[21] C. Avramescu, 
Méthodes Topologiques Dans la Théorie des Équations 
Différentielles, Cours Études Approfondies, Reprografia Universitati 

[22] V. Lakshmikantham and S. G. Deo 
Method of Variation of Parameters for Dynamic Systems, Gordon and 

[23] M. Schechter, 
Linking Methods in Critical Point Theory, Birkhäuser Boston, Inc., 

[24] D. Pascali, 
Topological Methods in Nonlinear Analysis, Lecture Notes in 
Mathematics, New York University, Courant Institute, 2000.

*Oscillation Theory for Difference and Functional Differential Equations*,

[26] **R. P. Agarwal, S. R. Grace and D. O'Regan,**


[27] **M. Kamenskii, V. Obukhovskii, P. Zecca,**


[28] **R. P. Agarwal, S. R. Grace and D. O'Regan,**


*Almost Periodic Solutions of Differential Equations in Banach Spaces*,


Topological *Fixed Point Principles for Boundary Value Problems*,

[31] **K. S. Ha,**

*Nonlinear Functional Evolutions in Banach spaces*,
[32] A. Granas and J. Dugundji,
Fixed Point Theory, Springer Monographs in Mathematics,

[33] R. P. Agarwal, M. Bohner, W.-T. Li,
Nonoscillation and Oscillation: Theory for Functional Differential

[34] J. Appel, E. De Pascale, A. Vignoli,

[35] Y. Q. Chen, Y. J. Cho,
Nonlinear Operator Theory in Abstract Spaces and Applications, Nova

Discrete Oscillation Theory, Hindawi Publishing Corporation, New
York, 2005.

[37] Y. Alber and I. Ryazantseva,
Nonlinear Ill-posed Problems of Monotone Type. Springer, Dordrecht,
2006.

[38] D. O'Regan, Y.-J. Cho and Y.-Q. Chen,
Topological Degree Theory and Applications, Chapman and Hall,
2006.
PRESENTATION OF PAPERS. SPEECHES


[28] BIRMINGHAM, ALABAMA, International Conference on Differential


[34] **GUANGZHOU, CHINA**, International Conference on Functional Differential Equations, May, 1993. Organized by the Mathematics Institute of the Chinese Academy of Sciences and several universities including: Anhui University, Fudan University, Hunan University, Qingdao Ocean University
and Zhongshan University. **Plenary** lecture. Title: “Compactness Methods and Methods of Lines in the Theory of Functional Differential Equations.”


[38] **IOANNINA, GREECE**, University of Ioannina, Department of Mathematics, Invited Colloquium lecture, May 19, 1995. Title: “Accretivity and Monotonicity in Nonlinear Evolution Equations and Elliptic Problems in Banach Spaces.”

[39] **JERUSALEM, ISRAEL**, First Joint American Mathematical Society - Israel Mathematical Union International Conference, Hebrew University (Givat Ram), May 24-26, 1995. Special Session on Optimization and Nonlinear


[49] TBILISI, REPUBLIC OF GEORGIA, International Symposium on Differential Equations and Mathematical Physics, June 21-25, 1997. The symposium was organized by the A. Razmadze Institute of the Georgian Academy of Sciences. Invited lecture. There were 4 invited lectures from the US. Title of lecture: “New Eigenvalue Results for Perturbations of Nonlinear Maximal Monotone and m-Accretive Operators in Banach Spaces”.


[52] CHIBA, JAPAN, Chiba University, Department of Mathematics. Mathematics Seminar of Professor Nobuyuki Kenmochi, May 24, 1999. Invited lecture. Title of lecture: “Topological Degree Theories for Densely Defined Mappings Involving Operators of Type (S+)”.

[54] FUKUOKA, JAPAN, Fukuoka University, Department of Mathematics, Mathematics Seminar of Professor Takasi Kusano, May 28, 1999. Invited lecture. Title of lecture: “Topological Degree Theories for Densely Defined Mappings Involving Operators of Type (S+).”


[56] BEIJING, CHINA, Institute of Mathematics of the Chinese Academy of Sciences, Professors Shujie Li and Bingren Li, June 7, 1999. Invited lecture. Title of lecture: “Topological Degree Theories for Densely Defined Mappings Involving Operators of Type (S+).”

[57] SHANGHAI, CHINA, Jiao Tong University, Department of Mathematics, Seminar of Professor Shunian Zhang. June 17, 1999. Invited lecture. Title of lecture: “Topological Degree Theories for Densely Defined Mappings Involving Operators of Type (S+).”


[63] **ORLANDO, FLORIDA, USA**, World Congress of Nonlinear Analysts, Invited 1-hour speaker and special session organizer. Title of the special session: “Topological Degree Theory and Its Applications”.

**PH.D. STUDENTS AT USF**

**MAJOR PROFESSOR OF THE FOLLOWING PH.D. STUDENTS AT USF**

3. **Terry J. Walters, 1978,** “*Contributions to the theory of the oscillation of matrix and scalar differential equations*”.


15. **Zouhua Ding, 1996**, “Contributions to the theory of the existence of zeros of perturbations of m-accretive operators in Banach spaces”.


19. **Joseph Quarcoo, 2006**, “Contributions to the degree theory for perturbations of maximal monotone operators”.

21. **Ibrahimou Boubakari**, “The Leray-Schauder approach for the topological degree of perturbed maximal monotone operators”.

22. **Teffera M. Asfaw**, “Topological Degree and Variational Inequality Theories for Pseudomonotone Perturbations of Maximal Monotone Operators”.

I have been the major professor of 21 Ph.D. students. I was the major professor of the first Ph.D. student of the department of mathematics at USF in 1975.

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