CURRICULUM VITAE

Dhruba R. Adhikari

Professor of Mathematics
Department of Mathematics
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Last Updated: October 31, 2023

EDUCATION

2002-2007   Ph.D. in Mathematics, University of South Florida, Tampa, Florida
Advisor: **Professor Athanassios G. Kartsatos**
Dissertation: *Applications of Degree Theories to Nonlinear Operator Equations in Banach Spaces*

2001-2002   Diploma (post-graduate) in Mathematics, The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy
Advisor: **Professor Gianni Dal Maso**
Dissertation: *An Existence Theorem in One-dimensional Variational Problems*

1994-1996   M.Sc. in Mathematics, Amrit Science Campus, Tribhuvan University, Kathmandu, Nepal

1992-1994   B.Sc. in Mathematics and Physics, Amrit Science Campus, Tribhuvan University, Kathmandu, Nepal

PROFESSIONAL EXPERIENCE

Aug. 2022- present   Professor of Mathematics, KSU Department of Mathematics

Aug. 2017- July 2022 Associate Professor, KSU Department of Mathematics

Aug. 2011-July 2017 Assistant Professor (tenure-track), KSU Department of Mathematics (formerly Southern Polytechnic State University), Marietta, Georgia

Aug. 2007-July 2011 Assistant Professor (tenure-track)
Department of Sciences & Mathematics
Mississippi University for Women, Columbus, Mississippi

Aug. 2002-July 2007 Graduate Teaching Assistant/Associate
Department of Mathematics & Statistics
University of South Florida, Tampa, Florida

Nov. 1998-June 2001 Lecturer (full time), Department of Mathematics
Kathmandu University, Dhulikhel, Nepal

Nov. 1997-June 2001 Lecturer of Mathematics (part time)
Amrit Science Campus
Tribhuvan University, Kathmandu, Nepal

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- American Mathematical Society, member (2017)
- Mathematical Association of America, member (2015-2016)
- Association of Nepalese Mathematicians in America, life-member, Vice-President (2011-2013), General Secretary (2013-2015), President (2015-2017)

HONORS, AWARDS, AND FELLOWSHIPS

1. KSU College of Science and Mathematics honoree faculty named by the recipient of the Outstanding Graduating Student Award in the Bachelor of Science in Computational and Applied Mathematics degree program in 2021
2. KSU College of Science and Mathematics Outstanding Faculty Mentor Award in the B.S. in Mathematics degree program, March 23, 2018
3. TIMES Fellow (Fall 2017) for implementing Inquiry-Oriented Differential Equations (IODE) (TIMES, IODE)
4. Project NExT Section Fellow (2008-2009), Louisiana/Mississippi Section of the Mathematical Association of America
5. Certificate of Recognition for Provost's Award 2007 for Outstanding Teaching by a Graduate Teaching Assistant at the University of South Florida
6. Outstanding Graduate Teaching Assistant leading to Departmental Nomination to the Provost's Award 2007 for Graduate Teaching Assistants at the University of South Florida
7. Departmental teaching award 2006 to Mathematics graduate teaching assistants. (*Each year an award is given to one or two Mathematics graduate teaching assistants at USF to recognize their excellence in teaching. This award is provided by the Department of Mathematics.*)
8. The Fred L. and Helen M. Tharp Scholarship (2002-2007), University of South Florida, Tampa, FL 33620. (*Each year, in addition to Teaching Assistantships and fellowships, outstanding graduate students selected by the department receive this scholarship.*)
9. Teaching Assistantship (2002-2007), Department of Mathematics, University of South Florida, Tampa, FL 33620.
10. The Abdus Salam ICTP Scholarship (2001-2002), The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy. (*This scholarship is given every year to only ten highly selective students from developing countries to participate in postgraduate diploma program in Mathematics at ICTP.*)
11. Amrit Science Medal (1994), Amrit Science College, Tribhuvan University, Kathmandu, Nepal. (*This award is given every year to a student obtaining the highest score in Bachelor of Science (B.Sc.) program at the college*).

TEACHING, SUPERVISION, & MENTORING

COURSES TAUGHT AT KENNESAW STATE UNIVERSITY (2015- PRESENT)

Course Prefix and Number	Course Title
MATH 1190	Calculus I
MATH 2202	Calculus II
MATH 2203	Calculus III
MATH 2260	Introduction to Probability and Statistics
MATH 3261	Statistical Methods
MATH 3204	Calculus IV
MATH 2306	Ordinary Differential Equations
MATH 3260	Linear Algebra I
MATH 4260	Linear Algebra II
MATH 4381	Real Analysis I
MATH 3321/4382	Real Analysis II
MATH 4310	Partial Differential Equations
MATH 4361	Modern Algebra I
MATH 4361/4596	Topology
MATH 4400	Directed Study - Analytic Methods in PDEs (3 students), Spring 2016
MATH 4400	Directed Study - Topological Degree Theory Via Analysis (1 student), Fall 2016
MATH 4400	Directed Study - Advanced Partial Differential Equations (1 student), Spring 2018
MATH 4451	Capstone Mathematics Project

Courses Taught at Southern Polytechnic State University (2011-2014)

Course Prefix and Number	Course Title
MATH 2253	Calculus I
MATH 2254	Calculus II
MATH 2255	Calculus III
MATH 2260	Introduction to Probability and Statistics
MATH 2306	Ordinary Differential Equations
MATH 3261	Statistical Methods
MATH 3312	Linear Algebra
MATH 3320	Introductory Real Analysis I
MATH 4406	Differential Equations II
MATH 4451	Capstone Mathematics Project

STUDENT SUPERVISION AT KSU(former SPSU)
Capstone Project Directed
1. Ibrahim AbuMadi, Spring 2012
   Capstone project title: *Sturm-Liouville Theory and Applications*
2. Mudasiru Adeyemo, Spring 2013
   Capstone project title: V*ariational Methods in Optimization Problems*

STUDENT SUPERVISION AT KATHMANDU UNIVERSITY

M.Phil. Dissertation Co-Supervised (no pecuniary compensation for the service)
1. Hari Prasad Gnawali, October 23, 2017
   M.Phil. Dissertation title: *Maximal Monotone Operators and Some Applications*
2. Jagdish Gnawali, November 10, 2016
   M.Phil. Dissertation title: *Lyapunov Function for the Dynamical Analysis of Lotka-Volterra Predator-Prey Model*
3. Chet Nath Tiwari, September 27, 2016
   M.Phil. Dissertation title: *Existence and Uniqueness of Weak Solution of Pennes Bioheat Equation*

SCHOLARSHIP OF TEACHING; RESEARCH AND CREATIVE ACTIVITY; PROFESSIONAL SERVICE; AND/OR ADMINISTRATION & LEADERSHIP

PUBLICATIONS

Peer-reviewed Journal Articles
1. D. R. Adhikari and E. Stachura, *Eigenvalue problems for p-div-curl systems,* J. Math. Anal. Appl. 526 (2023), no. 2, Paper No. 127327. (https://doi.org/10.1016/j.jmaa.2023.127327)
2. D. R. Adhikari, *Continuity of Yosida Approximants of Maximal Monotone Operators Corresponding to General Duality Mappings,* Advances in Mathematical Sciences and Applications, Vol. **32** (2023), No. 1, pp. 59–71.
3. D. R. Adhikari, A. Aryal, G. Bhatt, I. J. Kunwar, R. Puri and M. Ranabhat. *Solvability of Inclusions Involving Perturbations of Positively Homogeneous Maximal Monotone Operators,* Electron. J. Differential Equations, Vol. **2022** (2022), No. 63, pp. 1-25.
4. D. R. Adhikari, T. M. Asfaw, and E. Stachura, *A topological degree theory for perturbed $\mathcal{A}_G(S_+)$ −operators and applications to nonlinear problems*, J. Math. Anal. Appl. 497 (2021), no. 2, 124912; https://authors.elsevier.com/a/1cMqB,WNxgV7V
5. D. R. Adhikari and E. Stachura, *A general p-curl system and duality mappings on Sobolev spaces for the Maxwell equations*, Electron. J. Differential Equations, Vol. 2020 (2020), No. 116, pp. 1-22.
6. D. R. Adhikari, *Topological Degree for Quasibounded Multivalued $(\tilde{S}_+)$-Perturbations of Maximal Monotone Operators, ,* Applicable Analysis, 99 (2020), No. 13, 2339-2360 (https://doi.org/10.1080/00036811.2018.1562058).

7. D. R. Adhikari, I. Kunwar, *Topological Degrees on Unbounded Domains, Open J. Math. Anal.,Vol.* 2(2018), Issue 2, pp. 41-50.
8. D. R. Adhikari, *Existence Results for Multivalued Operators of Monotone Type in Reflexive Banach Spaces, International Conference on Applications of Mathematics to Nonlinear Sciences,* Electron. J. Differential Equations, Conference 24 (2017), pp. 1-10.
9. D. R. Adhikari, *Nontrivial Solutions of Inclusions Involving Perturbed Maximal Monotone Operators,* Electron. J. Differential Equations, Vol. 2017 (2017), No. 151, 1-21.
10. D. R. Adhikari, Invariance of Domain for Operators of Class $\mathcal{A}_G(S_+)$, Nepali Math. Sci. Rep., Vol. **34** (2016), no.11-18.
11. D. R. Adhikari, A. G. Kartsatos, *Invariance of Domain and Eigenvalues for Perturbations of Densely Defined Linear Maximal Monotone Operators,* Appl. Anal. **95** (2016), no. 1, 24-43.
12. D. R. Adhikari, Solvability *of Perturbed Maximal Monotone Operator Inclusions in Banach spaces,* Nepali Math. Sci. Rep., Vol.**33** (2014), no. 1 & 2, 1-16.
13. D. R. Adhikari, *Existence Results for Nonlinear Perturbations of Linear Maximal Monotone Operators*, Neural, Parallel, and Scientific Computations **22** (2014), 261-276.
14. D. R. Adhikari, A. G. Kartsatos, *New Topological Degree Theory for Perturbations of the Sum of Two Maximal Monotone Operators*, Nonlinear Analysis **74** (2011), 4622-4641.
15. D. R. Adhikari, A. G. Kartsatos, *Strongly Quasibounded Perturbations of Linear Densely Defined Maximal Monotone Operators for Berkovits-Mustonen Topological Degree Theory*, J. Math. Anal. Appl. **384** (2008), 122-136.
16. D. R. Adhikari, A. G. Kartsatos, *Topological Degree Theories and Nonlinear Operator Equations in Banach Spaces*, Nonlinear Analysis **69** (2008), 1235-1255.

Thesis/Dissertation
- D.R. Adhikari, *Applications of Degree Theories to Nonlinear Operator Equations in Banach Spaces*, Ph.D. Dissertation (2007), University of South Florida, Tampa, Florida.
- D.R. Adhikari, *An Existence Theorem in One-dimensional Variational Problems*, Dissertation for postgraduate diploma (2002), ICTP, Trieste, Italy.

Submitted Manuscripts
1. D. R. Adhikari and T. M. Asfaw, *Surjectivity theorems for multivalued compact perturbations of m-accretive operators*. Submitted to *Proceedings of the Royal Society of Edinburgh Section A: Mathematics* *ArXiv link*

In Preparation
- D. R. Adhikari and T. M. Asfaw, *A degree theory for $A_G^\phi(S_+)$-perturbations of maximal monotone operators and applications to nonlinear problems*
- D. R. Adhikari and E. Stachura, *On the Uniqueness of Topological Degrees for Densely Defined Mappings Involving Variants of (S_+)-Operators.*

Other published works

Books Reviewed (*MAA Reviewer*)

1. [Applied Nonlinear Functional Analysis: An Introduction](#), Nikolaos S. Papageorgiou and Patrick Winkert
2. [Morse Index of Solutions of Nonlinear Elliptic Equations](#), Lucio Damascelli and Filomena Pacella
3. [Semigroups of Linear Operators and Applications](#), Jerome A. Goldstein (2018)
4. [Boundary Value Problems of Applied Mathematics](#), John L. Troutman and Maurino P. Bautista (2018)
5. [An Invitation to Applied Mathematics](#), Carmen Chicone
6. [Partial Differential Equations in Action: From Modelling to Theory](#), Sandro Salsa
7. [Exercises in Analysis, Part 1](#), Leszek Gasiński and Nikolaos S. Papageorgiou
8. [Partial Differential Equations](#), Jürgen Jost
9. [Introduction to Mathematical Modeling and Chaotic Dynamics](#), Ranjit Kumar Upadhyay and Satteluri R. K. Iyengar
10. [Linear and Nonlinear Functional Analysis with Applications](#), Philippe G. Ciarlet
11. [Topics in Critical Point Theory](#), Kanishka Perera and Martin Schechter
12. [Nonlinear PDEs: Mathematical Models in Biology, Chemistry and Population Genetics](#), Marius Ghergu and Vicențiu D. Rădulescu
13. [Nonlinear Partial Differential Equations for Scientists and Engineers](#), Lokenath Debnath

Articles Reviewed (*MathSciNet Reviewer*)

1. Asfaw, Teffera M., *A proof of Nirenberg conjecture on expansive mappings in Hilbert spaces,* J. Math. Anal. Appl. 493 (2021), no. 1, 124526, 10 pp, [MR4141498](#), reviewed in December, 2020
2. Bargetz, Christian; Reich, Simeon Generic convergence of sequences of successive approximations in Banach spaces. Pure Appl. Funct. Anal. 4 (2019), no. 3, 477–493, [MR4008379](#), reviewed in August, 2020
3. Ali Reza Sattarzadeh and Hossein Mohebi, General Resolvent of Monotone Bifunctions, *Journal of Nonlinear and Convex Analysis* 19, No. 5, 841--852 (2018), [MR3817911](#), reviewed in December, 2018
4. [Alizadeh, M. H.](#); [Roohi, M.](#) Some results on pre-monotone operators. *Bull. Iranian Math. Soc.* [43 (2017), no. 6,](#) 2085–2097, reviewed in July, 2018 [MR3773523](#)
5. Yao, Liangjin, *Finer properties of ultramaximally monotone operators on Banach spaces*, J. Convex Anal. 23 (2016), no. 4, 1205–1218. [MR3571570](#), reviewed in March, 2017.

Books and Articles Reviewed (*Zentralblatt MATH Reviewer*)

1. Bich, Huy Nguyen; Van, Hien Pham, *Vector-valued measures of noncompactness and the Cauchy problem with delay in a scale of Banach spaces,* J. Fixed Point

Theory Appl., 22, No. 2, Paper No. 36, 13 p. (2020). [Zbl 07183507](#), reviewed in May, 2021

2. Nabil, Tamer; Soliman, Ahmed H.,*Common fixed point theorems for generalized non-expansive semi-topological semigroups in locally convex spaces,* Fixed Point Theory 18, No. 2, 709-720 (2017), [Zbl 06840714](#), reviewed in December 2018

3. Benevieri, Pierluigi; Zecca, Pietro*, Topological degree and atypical bifurcation results for a class of multivalued perturbations of Fredholm maps in Banach spaces,* Fixed Point Theory 18, No. 1, 85-106 (2017, [Zbl 06696976](#), reviewed in December, 2017.

4. Erzakova, Nina A., *Measures of noncompactness in regular spaces* (English), Can. Math. Bull. 57, No. 4, 780-793 (2014). [Zbl 06377663](#), reviewed in December, 2016.

5. Lau, Anthony To-Ming; Zhang, Yong, *Fixed point properties for semigroups of nonlinear mappings on unbounded sets,* J. Math. Anal. Appl. 433, No. 2, 1204-1219 (2016). [Zbl 1359.47052](#), reviewed in September, 2016.

6. Banaś, Józef; Mursaleen, Mohammad *Sequence spaces and measures of noncompactness with applications to differential and integral equations* (book). [Zbl 1323.47001](#), reviewed in October, 2015.

7. Lau, Anthony To-Ming, *Approximation of fixed points and ergodic sequences for semigroups of non-expansive mappings,* J. Nonlinear Convex Anal. 15, No. 3, 451-461 (2014). [Zbl 1293.47062](#), reviewed in July, 2014.

8. Suantai, Suthep; Phuengrattana, Withun, *Fixed point theorems for a semigroup of total asymptotically nonexpansive mappings in uniformly convex Banach spaces,* Opusc. Math. 34, No. 1, 183-197 (2014), [Zbl 1306.47070](#), reviewed in August, 2014.

9. Ma, Zhaoli; Wang, Lin, *Strong convergence theorems of strongly relatively nonexpansive semi-group in Banach spaces,* Math. Inequal. Appl. 16, No. 4, 1137-1150 (2013). [Zbl 1306.47069](#), reviewed in September, 2014.

Book Proposals Reviewed
1. Title: *Diffusion processes in Biological populations*, Ranjit Kumar Upadhyay and Satteluri R.K. Iyengar Springer, completed and submitted on November 7, 2015
2. Title: *Iterative Methods without Inversion*, Dr. Anatoly Galperin, CRC Press Taylor & Francis, completed and submitted on June 6, 2015

Reviewed Submitted Articles for the following journals:
1. Ricerche di Matematica, A Journal of Pure and Applied Mathematics published by Springer-Verlag (one article in May 2021)
2. Vietnam Journal of Mathematics (one article in September 2018)

TEACHING PARTNER/WORKSHOP
- Participated in TIMES Summer Workshop at Fairfax High School in Fairfax, Virginia, on June 28-30, 2017. The workshop prepared me for Inquiry-Oriented Differential Equations (IODE) which I implemented in two sections of Math 2306 in Fall 2017.

- Participated in Teaching Partner Program at SPSU coordinated by Dr. Jennifer Vandenbussche. Dr. Sarah Holliday was my teaching partner in Fall 2012, Fall 2013 and Dr. Sandeep Das in Fall 2014. Both teaching partners gave me very fruitful feedback which has helped me deliver more effective teaching.
- Attended a 4-day workshop on Inquiry Based Learning (IBL) workshop as part of the Mathematical Association of America's PREP program organized by Department of Mathematics at Cal Poly San Luis Obispo on July 7-10, 2015.

MANUSCRIPT

Prepared the manuscript entitled "Differentiability in Banach Spaces" to supplement a course that I delivered in summer school as a part of the Conference on Nonlinear Systems and Summer School (June 3- 22, 2013), Kathmandu, Nepal. The manuscript also supplemented a lecture series that I delivered in Nonlinear Analysis for M.Phil. at Kathmandu University, Dhulikhel, May 9-June 15, 2013.

PRESENTATIONS

2011- present (KSU/SPSU)

1. **Invited** talk on *Solvability of Inclusions Involving Perturbations of Positively Homogeneous Maximal Monotone Operators,* Third International Conference on Application of Mathematics to Nonlinear Sciences, Pokhara, Nepal, May 25, 2023
2. **Keynote** talk on *Solvability of Inclusions Involving Perturbations of PositivelyHomogeneous Maximal Monotone Operators* at International Workshop on Applications of GeometricMethods of Functional Analysis, University of Texas at Dallas, May 4, 2022
3. Contributed talk on *A topological degree theory for perturbed $\mathcal{A}_G(S_+)-operators$ and applications to nonlinear problems,* UNCG Greensboro Partial Differential Equations Conference, July 24-25, 2021
4. **Invited** talk on *Topological Degrees for Quasibounded Multivalued $(\tilde{S}_+)$-Perturbations of Maximal Monotone Operators,* International Conference on Analysis and Applications organized by Nepal Mathematical Society, Kathmandu University, Nepal, April 9-11, 2021
5. **Keynote** talk on *Scholarly Writing and Publishing Articles in Mathematics*, organized by Nepal Mathematical Society, Pradesh #1, October 16, 2020
6. **Invited** plenary talk (Zoom) on *Capacity Building Workshop on Refresher Courses in Mathematics (CBWRCM-2020)*, organized by Nepal Mathematical Society, August 16, 2020
7. Talk on *On the Uniqueness of Topological Degrees for Densely Defined Variants of (S_+)-Operators,* The 38th Southeastern-Atlantic Regional Conference on Differential Equations, Embry-Riddle Aeronautical University, October 26, 2019.
8. Contributed talk on *Topological Degrees for Quasibounded Multivalued $(\tilde{S}_+)$-Perturbations of Maximal Monotone Operators,* Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019), June 27-30, 2019

9. Contributed talk on *Topological Degrees for Quasibounded Multivalued $(\tilde{S}_+)$-Perturbations of Maximal Monotone Operators,* the Joint Mathematics Meetings, Baltimore, Maryland, January 18, 2019.
10. Talk on *Topological Degrees for Quasibounded Multivalued $(\tilde{S}_+)$-Perturbations of Maximal Monotone Operators,* The 37th Southeastern-Atlantic Regional Conference on Differential Equations, University of North Georgia, October 7, 2018.
11. Invited colloquium talk on *Subdifferentials and Maximal Monotonicity*, Department of Mathematical Sciences, The University of Alabama in Huntsville, September 28, 2018
12. Invited talk on *Existence Results for Multivalued Operators of Monotone Type in Reflexive Banach Spaces*, XXXI Seminar in Differential Equations, Velehrad, Czech Republic, May 22, 2018
13. Talk on *Subdifferentials and Maximal Monotonicity*, Math Talks, Department of Mathematics, Kennesaw State University, April 13, 2018
14. Invited colloquium talk on *Maximal Monotonicity and Existence of Nonzero Solutions*, Department of Mathematics, University of Alabama at Birmingham, March 20, 2017
15. Invited colloquium talk on *Topological Degree in Finite-Dimensional Spaces and Some Applications*, Department of Mathematics, Spelman College, Georgia, March 20, 2017.
16. Contributed talk entitled *On the Uniqueness of Topological Degrees for Densely Defined Mappings Involving Variants of (S+)-Operators,* The Joint Mathematics Meetings, Atlanta, Georgia, January 5, 2017.
17. Invited colloquium talk on *Maximal Monotonicity and Existence of Nonzero Solutions*, Department of Mathematics, The University of Southern Mississippi, Hattiesburg, Mississippi, December 2, 2016.
18. Invited talk on *Solvability of Inclusions Involving Perturbations of Maximal Monotone Operators* in the Special Session on Nonlinear Boundary Value Problems, Fall Southeastern Sectional Meeting, North Carolina State University, Raleigh, NC, November 13, 2016.
19. Talk on *Invariance of Domain for $A_G(S_+)$ $-operators,$* The 36th Southeastern-Atlantic Regional Conference on Differential Equations, Florida Gulf Coast University, Fort Myers, Florida, November 5, 2016.
20. Colloquium talk on *Topological Degree Theory and Some Applications* in Math Talks at Kennesaw State University, October 6, 2016.
21. Talk on *Nontrivial Solutions of Perturbed Maximal Monotone Operator Inclusions*, International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016), Kathmandu, Nepal, May 26-29, 2016.
22. Seminar talk on *Maximal Monotonicity and Existence of Nonzero Solutions,* Analysis and Applied Mathematics Seminar, Department of Mathematics, Kennesaw State University, October 7, 2015
23. Contributed talk on *Invariance of domain and eigenvalues for perturbations of densely defined linear maximal monotone operators,* The 35th Southeastern Atlantic Regional Conference on Differential Equations (SEARCDE 2015), University of North Carolina at Greensboro, October 10-11, 2015

24. Invited talk on *Solvability of Operator Inclusions Involving Homogeneous Maximal Monotone Operators,* Seventh International Conference on Dynamic Systems and Applications & Fifth International Conference on Neural, Parallel, and Scientific Computations, May 27-30, 2015 Morehouse College, Atlanta, Georgia
25. Talk on *Nonzero Solutions to Operator Inclusions Involving Perturbed Maximal Monotone Operators,* the Joint Mathematics Meetings, January 10, 2015
26. Pre-module joint presentation on *Blood Splatter Analysis*, Command, Control, and Interoperability Center for Advanced Data Analysis, Reconnect Workshop, Massachusetts Maritime Academy, June 1-7, 2014
27. Talk on *Solvability of Operator Inclusions Involving Perturbed Maximal Monotone Operators,* the 30th Southeastern Analysis Meeting, Clemson University, March 7-8, 2014
28. Invited talk on *Teaching a 50-minute Undergraduate Mathematics Class*, Kathmandu University, May 28, 2013
29. Invited lecture series on *Differentiability in Banach spaces and Degree Theories* in summer school (June 16-18, 2013) as a part of the Conference in Nonlinear Systems and Summer School, Kathmandu, June 3- 22, 2013
30. Invited lectures (lecture notes prepared) on various topics in *Nonlinear Analysis* for M.Phil. students at Kathmandu University, Dhulikhel, May 9-June 15, 2013
31. Invited talk on *Domain Invariance and Eigenvalues for Perturbed Maximal Monotone Operators* at the Conference on Nonlinear Systems and Summer School, Kathmandu, Nepal, June 3- 22, 2013
32. Invited colloquium talk on *Topological Degree Theories and Nonlinear Operator Equations in Banach Space*s, Analysis and Applied Math Seminar, Department of Mathematics and Statistics, Kennesaw State University, October 26, 2012
33. Invited talk *on Eigenvalues and Sets in the Range of Perturbed Sum of Two Maximal Monotone Operators*, the 6th World Congress of Nonlinear Analysts, Athens, Greece, June 25-July1, 2012
34. Talk on *A New Topological Degree Theory for Perturbations of the Sum of Two Maximal Monotone Operators*, the 31st Southeastern Atlantic Regional Conference on Differential Equations (SEARCDE) 2011, September 30 – October 1, 2011

Prior to SPSU (before 2011)
1. Invited talk on *Topological Degree Theories and Applications*, Department of Mathematics, Southern Polytechnic State University, April 2011
2. Invited talk *on Solvability of Nonlinear Operator Equations via Degree Theories*, Nepal Mathematical Society (NMS), Padma Kanya Campus, Tribhuvan University, Kathmandu, Nepal, July 7, 2010
3. Invited talk on *Nonlinear Operator Equations and Degree Theories*, the first AAUW Faculty Symposium, co-sponsored with The Women's Studies Advisory Committee and The Center for Women's Research and Public Policy, Mississippi University for Women, February 15, 2010

4. Talk on *Invariance of Domain and Eigenvalues of Perturbations of Linear Densely Defined Maximal Monotone Operators*, the Eighth Mississippi State - UAB Conference on Differential Equations and Computational Simulations, Mississippi State University, May 7-9, 2008
5. Colloquium talk on *Some Topological Degree Theories and Applications*, Department of Mathematics, University of Alabama at Birmingham, November 7, 2008
6. Invited talk on *Invariance of Domain and Eigenvalues of Perturbations of Linear Densely Defined Maximal Monotone Operators in Banach Spaces*, Organized Session on Topological Degree Theory, Related Fields and Applications, World Congress of Nonlinear Analysts (WCNA-2008), July 2, 2008, Orlando, Florida
7. Colloquium talk on *Topological Degree Theories and Applications*, Department of Mathematics and Statistics, Mississippi State University, April 23, 2008
8. Talk on *Strongly Quasibounded Perturbations of Linear Densely Defined Maximal Monotone Operators for Berkovits-Mustonen Topological Degree Theory*, AMS Session on Abstract Harmonic Analysis and Operator Theory, II, January 8, 2008
9. Talk on *Topological Degree Theories and Nonlinear Operator Equations in Banach Spaces*, AMS Session on Operator Theory and Optimal Control, II, January 8, 2007.

SERVICE

University
(i) Served as member in SACS Report Subcommittee #5 (Fall 2013). The committee met just once, but the consolidation of SPSU and KSU was announced.
(ii) Volunteered in showcasing the mathematics program of SPSU on Preview Days (Open Houses) on 10/04/2014 (Dr. Nicolae Pascu joined me) and 11/01/2014 (only me) at the student center (ballroom) of SPSU, and answered prospective mathematics students' questions in the program session in R2-318 later on both days.

College
Currently serving on the College Faculty Council (3-year term since Fall 2020)

Department or Program
1. Serving (Fall 2020-) on the Graduate Program Committee
2. Serving (2017 - present on Strand Committee for Real and Complex Analysis
3. Served on the organizing team of Workshop on Methods of Nonlinear Analysis held on Nov 14-15, 2020, in the Department of Mathematics
4. Served as the Chair of the Lecturer of Mathematics Committee; positions began in Spring 2020 and Fall 2020
5. Served (2017-2018) on the Strand Committee for Algebra
6. Currently serving (2014—present) as a member on the Analysis and Applied Mathematics seminar committee. Responsibilities include: invite speakers, organize and run talks, manage seminar budget, arrange refreshments and other logistics.

7. Served on the Promotion and Tenure Committee (Fall 2017 - Spring 2019) in the Department of Mathematics
8. Served as the Chair of the organizing committee for SEARCDE 2017
9. Served on the Department of Mathematics Chair Search Committee (2016-2017)
10. Core Curriculum Committee, Statistics Committee (Spring 2013-2014), Linear Algebra Committee (Fall 2012 - 2014)
    - Prepared survey questions for Math 1113 and edited survey questions for Math 1111, and Math 2260
    - Worked with the math faculty at KSU and combined Math 2260 and Math 3261
    - Worked with the math faculty at KSU and combined courses in Ordinary Differential Equations (Math 2306, SPSU) and Partial Differential Equations (Math 4406, SPSU).
    - Worked with math faculty at KSU to combine Math 3321 (SPSU, Real Analysis II)
    - Worked some time for redesigning Math 3312 (SPSU), but the work was stopped due to the consolidation.
11. Faculty Search Committee (a hired faculty began in Fall 2012) in mathematics
12. Academic advising (currently 4 students): In addition to the course registration, I discuss with students about their carrier opportunities in mathematics as well as elective courses that would best fit their interests and carrier goals.

THE PROFESSION

Service to Conferences
1. Serving (Fall 2014 - present) on the organizing of the Analysis and Applied Mathematics (AAM) seminar in the Department of Mathematics at KSU
2. Currently serving on the Steering Committee and Organizing Committee of the Second International Conference on Application of Mathematics to Nonlinear Sciences (AMNS-2023) to be held in Pokhara, Nepal, during May 25-28, 2023
3. Currently serving on the Steering Committee (**2015-present**) of Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE)
4. Served as a Thematic Issue Editor of the Proceedings of the Second International Conference on Application of Mathematics to Nonlinear Sciences (AMNS-2019).
5. Served on the organizing committee for the Second International Conference on Applications of Mathematics to Nonlinear Sciences (ANMS-2019), June 27-30, 2019, Pokhara, Nepal
6. Served as Editor of the Proceedings of 37th *Southeastern-Atlantic Regional Conference on Differential Equations* (2017-2018); proceedings published at https://acadsol.eu/caa/23/1
7. Lead organizer of the 37th Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE 2017) held at Kennesaw State University on October 7-8, 2017.
8. Served on the Organizing Committee of the Sixth Annual Kennesaw Mountain Undergraduate Conference, February 17-18, 2017.

9. Served as a convener of the International Conference on Application of Mathematics to Nonlinear Sciences (AMNS-2016) held in Kathmandu, Nepal, May 26-29, 2016
10. Served on the organizing committee for the Fifth Annual Kennesaw Mountain Undergraduate Mathematics Conference, October 24, 2015
13. Co-chaired Workshop on Operator Theoretic Techniques in the Theory of Nonlinear Equations-I (Room # 152), Seventh International Conference on Dynamic Systems and Applications & Fifth International Conference on Neural, Parallel, and Scientific Computations, May 27-30, 2015 Morehouse College, Atlanta, Georgia
14. Organized weekly seminar on Nonlinear Analysis in the Mathematics Department at SPSU in Spring 2014.
15. Volunteered as a judge for students' presentation at the fourth annual Kennesaw Mountain Undergraduate Mathematics Conference (KMUMC) on October 11, 2014, at Kennesaw State University
16. Organized and chaired a special session on Analytical PDEs / Operator Theory at the Conference on Nonlinear Systems and Summer School (June 3- 22, 2013), Kathmandu, Nepal
17. Volunteered as a judge for students' presentation at the third annual Kennesaw Mountain Undergraduate Mathematics Conference (KMUMC) on November 9, 2013 at Kennesaw State University

Service to Journals/Reviews
1. Member of Editorial Board of the Nepali Mathematical Sciences Report
2. Book Reviewer (2012- present) for Mathematical Association of America (See **Other published works** above)
3. Reviewer (2017- present) for MathSciNet (see **Other published works** above) – reviewed 2 articles in 2020.
4. Reviewer (2014- present) for Zentralblatt MATH (zbMATH) (See **Other published works** above)

Service to Professional Association
1. Member of the Advisory Board of Association of Nepalese Mathematicians in America (2019 - 2020)
2. Association of Nepalese Mathematicians in America (Vice-president (2011-2013), General Secretary (2013-2015), President (2015-2017))
   - Founder member of the Association of Nepalese Mathematicians in America (ANMA: www.anmaweb.org).
   - Prepared bylaws, association logo, and many other technical details.
   - Designed and published the websites www.anmaweb.org and www.anmaweb.org/AMNS-2016.
   - As the general secretary, drafted the minutes of all executive meetings and forwarded to the president of ANMA.

THE COMMUNITY

Professionally Related Service to the Community

    (i)   Volunteered as a panel judge for Physical Model and Team Presentation in the Future City event that was held on SPSU campus on January 25, 2014

    (ii) Volunteered as a judge for the 8th Annual Research Conference & Symposium hosted by the Peach State LSAMP group on October 10-12, 2013

    (iii) Volunteered as a panel judge in the Future City event that was held on SPSU campus on January 21, 2012

Grants/ Grant Solicitation/Fellowships

    (i)   Grant proposal submitted as PI to NSF (project title: *Topological and Variational Inequality Methods for Strongly Nonlinear Partial Differential Inclusions*) on November 10, 2020, budget requested = $118,283.00 (under review)

    (ii) The 2019 CSM Research Funding support = $6,449.00

    (iii) The 2019 CSM Stimulus Research Program = $6,329.80.

    (iv) Grant proposal submitted as PI to NSF (project title: *Topological Methods for Nonlinear Operator* Equations) on November 6, 2018, budget requested = $108,617 (not funded).

    (v) The 2018 Stimulus Research Program, award = $7,469.

    (vi) "TIMES Teaching Fellow," Funded, Sponsored by NSF, NC State, $750.00. (August 2017 - December 2017).

    (vii)   Grant proposal submitted as PI to NSF to organize the 37th Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE 2017) at Kennesaw State University on October 7-8, 2017.
Budget requested = $ 39,791 (not funded).

    (viii)   The 2017 Stimulus Research Program, award = $7,500.

    (ix) Proposal submitted to the College of Science and Mathematics of Kennesaw State University for the 2016 Stimulus Research Program, award = $8,449.

    (x) Proposal submitted to the NSF Early Career Faculty Development Program on July 21, 2016, budget requested = $410, 204 (not funded).

    (xi) Proposal submitted to the Simon Foundation Collaboration Grants for Mathematicians on January 8, 2016, five-year budget = $35,000 (not funded).