APPLIED MATHEMATICS DEPARTMENT

S. V. NATIONAL INSTITUTE OF TECHNOLOGY, SURAT – 395 007, GUJARAT

Designation : Assistant professor

Qualification : M.Sc, Ph.D.

E-mail: dg@ashd.svnit.ac.in; gopal.dhananjay@rediffmail.com;

Specialization :

- Fixed point theory,
- Non-linear analysis,
- Fuzzy analysis
- Topology
- Image processing

Teaching Experience : 09 years

Subject Taught : General Topology, Fuzzy Set Theory, Number Theory, Engineering Mathematics.

Book Authored : 01 (Title - Background and Recent Developments of Metric Fixed Point Theory , CRC Press 2017 (In Press)-ISBN 9780815369455 - CAT# K337983**)**

Sponsored Research Project : 02

CSIR Sponsored Project completed : 01 (March 2015)

UGC Sponsored Project recommended

Invited talks : 10

Conference/Seminar /workshop organized : 10

No. of Ph.D students : 04 Completed: 01

Ongoing : 03

Master Dissertation : 04

Prizes/Awards/Recognition

Gold Medal in M.Sc. Mathematics, 2001, G.G.U. Bilaspur, Chattishgarh.

Young Scientist Award, NKAMC Chhattisgarh, India in 2009.

International Meet

1) Visited Department of Mathematics Thammasat University, Bangkok, Thailand as Visiting Professor from 9th May to 20th June 2016.

2) Visited Department of Mathematics KMUTT, Bangkok, Thailand as Visiting Researcher from October 15 - to November 08, 2015.

3) Visited Department of Mathematics and Applied Mathematics, University of Pretoria, (South Africa) for joint research work during Nov. 24 – 1 Dec., 2013.

4) Visited Department of Mathematics, Azarbaijan University of Shahid Madani, Tabriz (Iran) for joint research work during July 04 – July 13, 2012.

5) Visited Department of Mathematics, Obafemi Awolowo University, Ile-Ife, Nigeria for joint research work during June 15 – July 5, 2011.

Publications

1) I. Beg, **D. Gopal**, T. Dosenovic, D. Rakic ,"α-Type Fuzzy H-Contractive Mappings In Fuzzy Metric Spaces" **Fixed Point Theory**,2018(In press).

2) **D Gopal**, Huaping Huang **,"**A Note On Recent Fixed Point Theorems For Expansion Mappings", **Journal of Advanced Mathematics Studies** ,2016.

3) Satish Shuklaa , **D Gopal** , Juan Mart´ınez-Morenoc "Fixed Points of Set-Valued F-Contractions and its Application to Non-Linear Integral Equations", **Filomat** 31:11 (2017), 3377–3390

4) M. Imdad, R Gubran, M Arif, **D Gopal** , "An observation on\alpha-type F-contractions and some ordered-theoretic fixed point results"**Mathematical Sciences**, 11(3),247-255,2017.

5) DK Patel, PR Patle, R Pant, **D Gopal** , "Fixed point results for a generalized class of simulation functions with applications",**arXiv preprint arXiv:1708.06514**, 2017.

6) DK Patel, PR Patle, L Budhia, **D Gopal** , "Coincidence point results involving a generalized class of simulation functions"**arXiv preprint arXiv:1708.05693**, 2017.

7) P Kumam, **D Gopal**, L Budhiyi, "A new fixed point theorem under Suzuki type $ Z $-contraction mappings", **Journal of Mathematical Analysis**, Volume 8 Issue 1(2017), pages 113 – 119.

8) L Budhia, M Kir, **D Gopal**, H Kiziltunç, "New fixed point results in rectangular metric space and application to fractional calculus" **Tbilisi Mathematical Journal**, 2017.

9) H Lakzian, **D Gopal**, W Sintunavarat "New fixed point results for mappings of contractive type with an application to nonlinear fractional differential equations", **Journal of Fixed Point Theory and Applications**, 2016.

10) A Padcharoen, **D Gopal**, P Chaipunya, P Kumam, "Fixed point and periodic point results for α-type F-contractions in modular metric spaces" **Fixed Point Theory and Applications**, 2016.

11) S Shukla, **D Gopal**, AF Roldán-López-de-Hierro "Some fixed point theorems in 1-M-complete fuzzy metric-like spaces." **International Journal of General Systems** ,45.7-8 (2016): 815-829.

12) S Shukla, **D Gopal**, R Rodríguez-López ,"Fuzzy-Prešić-Ćirić Operators and Applications to Certain Nonlinear Differential Equations." **Mathematical Modelling and Analysis** ,21.6 (2016): 811-835.

13) S Komal, P Kumam, **D Gopal** , "Best Proximity point for Z-contraction and Suzuki type Z-contraction mappings with an application to fractional calculus" **Applied General Topology** ,17.2 (2016): 185-198.

14) D Jain, A Padcharoen, P Kumam, **D Gopal** "A new approach to study fixed point of multivalued mappings in modular metric spaces and applications." **Multidisciplinary Digital Publishing Institute** 4.3 (2016): 51.

15) H Lakzian, **D Gopal**, W Sintunavarat "New fixed point results for mappings of contractive type with an application to nonlinear fractional differential equations." **Journal of Fixed Point Theory and Applications** ,18.2 (2016): 251-266.

16)D Gopal, M Abbas, DK Patel, C Vetro "Fixed points of α-type F-contractive mappings with an application to nonlinear fractional differential equation." **Acta Mathematica Scientia** , 36.3 (2016): 957-970.

17) LB Budhia, P Kumam, J Martínez-Moreno, **D Gopal** , "Extensions of almost-F and F-Suzuki contractions with graph and some applications to fractional calculus" **Fixed Point Theory and Applications**, 2016.

18) P Sumalai, P Kumam, **D Gopal** , "Computational coupled fixed points for F-contractive mappings in metric spaces endowed with a graph", **JOURNAL OF MATHEMATICS AND COMPUTER** ..., 2016.

19) P Kumam, YJ Cho, **D Gopal** , "Special Issue on Advances in Fixed Point Theory towards Real World Optimization Problems' Preface",**RGN PUBL** ,2016.

20)D Gopal, Erdal Karapinar, "Remark on P-D operator", **Thai J. Mathematics** ,2015.(Article in press).

21) N. Wairojjana, T. Došenović, D. Rakić, **D .Gopal**, P. Kumam "An altering distance function in fuzzy metric fixed point theorems" **Fixed Point Theory and Applications** 2015 (1), 1-19.

22)MA Kutbi, **D Gopal**, C Vetro, W Sintunavarat "Further generalization of fixed point theorems in Menger PM-spaces" **Fixed Point Theory and Applications** 2015 (1), 1-10.

23)D. Gopal, C Vetro, M Abbas, DK Patel, "Some coincidence and periodic points results in a metric space endowed with a graph and applications" **Banach Journal of Mathematical Analysis** 9 (3), 128-139, 2015.

24)D. Gopal, C Vetro, "Some New Fixed Point Theorems in Fuzzy Metric Spaces" **Iranian Journal of Fuzzy Systems** 11 (3), 95-107, 2014.

25) D. Gopal, M. Abbas, C. Vetro, "Some new fixed point theorems in Menger PM-spaces with application to Voltera type integral equation" **Applied Mathematics and Computation**. 232, 955-967, **2014.**

26)D. Gopal, D. K. Patel, "An alternative approach to "Fixed point theorems for occasionally weakly compatible mappings" **J. Egyptian Math. Soc.** 22 (3), 481-483, 2014(Elsevier).

27)T. Dosenovic, P. Kumam, **D. Gopal**, D.K. Patel, A. Takaci "On fixed point theorems involving altering distances in Menger probabilistic metric spaces" **Journal of Inequalities and Applications** 2013, 2013:576, 10 pages.

28)D. K. Patel, P. Kumam, **D. Gopal** "Some discussion on the existence of common fixed points for a pair of maps" **Fixed Point Theory and Applications** 2013, 2013:187, 17 pages.

29) D.K. Patel, T. Abdeljawad, **D. Gopal** "Common fixed points of generalized Meir-Keeler α-contractions" **Fixed Point Theory and Applications** 2013, 2013:260, 16 pages.

30)H. Alikhani, **D. Gopal**, MA Miandaragh, S Rezapour, N Shahzad "Some endpoint results for β-generalized weak contractive multifunctions" **The Scientific World Journal** 2013, Article ID 948472, 7 pages.

31) P. Kumam, F. Rouzkard, M. Imdad, **D. Gopal** "Fixed point theorems on ordered metric Spaces through a rational contraction"**Abstract and Applied Analysis** 2013, Article ID 206515, 9 pages.

32) D. Gopal, F. Rouzkard, M. Imdad "Some existence and uniqueness theorems on ordered metric spaces via generalized distances" **Fixed Point Theory and Applications** 2013, **2013**:45, 20 pages.

33)E. Karapınar, D.K. Patel, M. Imdad, **D. Gopal** "Some Nonunique common fixed point theorems in symmetric spaces through $CLR_{(ST)}$ Property" **International Journal of Mathematics and Mathematical Sciences** 2013, Article ID 753965, 8 pages.

34)M. Abbas, T. Nazir, **D. Gopal** "Common fixed point results for generalized cyclic contraction mappings" **Afrika Matematika** 2013, doi: 10.1007/s13370-013-0206-y.

35)Beg, C. Vetro**, D. Gopal**, M. Imdad "(φ, ψ)-weak contractions in intuitionistic fuzzy metric spaces" **Journal of Intelligent and Fuzzy Systems** 2013, doi: 10.3233/IFS-130920.

36)Choudhury, Binayak S., **D. Gopal**, Das, Pradyut“ Coupled coincidence point results in fuzzy metric spaces without completeness" **Ann. Fuzzy Math. Inform**. 6 (2013), no. 1, 127–133.

37)Abdeljawad, Thabet, **D. Gopal** “ Erratum to `Meir-Keeler α-contractive fixed and common fixed point theorems' ***Fixed Point Theory Appl.*** *2013,* 2013:110, 3 pp.

38)M. Tanveer, M. Imdad, **D. Gopal**, D.K. Patel “Common fixed point theorems in modified intuitionistic fuzzy metric spaces with common property (EA)” **Fixed Point Theory and Applications** 2012, 2012:36, 12 pages.

39)D. Gopal, M. Imdad, M. Abbas “Metrical common fixed point theorems without completeness and closedness” **Fixed Point Theory and Applications** 2012, 2012:18, 9 pages.

40) M. Imdad, **D. Gopal**, M. Hasan, “Absorbing pairs facilitating common fixed point theorems for Lipschitzian type mappings in symmetric spaces” **Communication of the Korean Mathematical Society**, 27(2), (2012), 385-397.

41)D. Gopal, C. Vetro, M. Imdad, “Impact of common property (E.A.) on fixed point theorems in fuzzy metric spaces” **Fixed Point Theory and Applications** 2011, Article ID 297360, 14 pages.

42)D. Gopal, M. Imdad, “Some new common fixed point theorems in fuzzy metric spaces” **Ann. Univ Ferrara**, 57(2), (2011), 303-316, (Springer).

44)D. Gopal, M. Imdad, C. Vetro, "Common fixed point theorems for mappings satisfying common property (E.A.) in symmetric" **Filomat** 25(2), (2011), 59-78.

45)D. Gopal, C. Vetro, M. Imdad, "Common fixed point theorems for (ϕ-ψ) weak contractions in fuzzy metric spaces" **Indian Journal of Mathematics**, 52(3), (2010), 573-590.

46)M. Abbas, **D. Gopal**, M. Imdad, "ψ-weak contractions in fuzzy metric" **Iranian Journal of Fuzzy Systems**, 8(5), (2010), 141-148. **.**

47)D. Gopal, U. Mishra and A. S. Ranadive, **"**A note on common fixed points of four mappings in a fuzzy metric space" **Journal of Fuzzy Mathematics**, (2009), 771-779.

48)M. Abbas, I. Altun and **D. Gopal** "Common fixed point theorems for non-compatible mappings in fuzzy metric spaces" **Bulletin of Mathematical Analysis and Applications**, 1(2), (2009), 47-56.

49)D. Gopal A. S. Ranadive and Urmila Mishra, "Some fixed point theorems in fuzzy metric spaces" **Tamkang Journal of Mathematics**, 39(4), (2008), 309-316.

50)U Mishra, AS Ranadive, **D. Gopal** "Fixed point theorems via absorbing maps" **Thai Journal of Mathematics** 6 (1), 2008, 49-60

51)D. Gopal, A. S. Ranadive and Urmila Mishra, "On some open problems for a pair of non-compatible self mappings" **Proceeding of B. H.U.**, 20, (2004), 135-141.

PH.D SCHOLARS

Deepesh Kumar Patel

Ph.D (Completed) : June - 2014

Thesis Title: On generalization of metrical fixed point theorems.

Assistant Professor
Department of Mathematics
Visvesvaraya National Institute of Technology, Nagpur

Papers published :

1) D. Gopal, M. Imdad, M. Hasan and **D.K. Patel**, Proving common fixed point theorems for Lipschitz type mappings via absorbing pairs, **Bulletin of Mathematical Analysis and Applications**, 3(4) (2011), 92-100. ("Erratum", 4(4) (2012), 45-46).

2) M. Tanveer, M. Imdad, D. Gopal and **D.K. Patel**, Common fixed point theorem in modified intuitionistic fuzzy metric space with common property (E.A), **Fixed Point Theory and Applications**, 2012 (2012), Article ID 36.

3) E. Karapinar, **D.K. Patel**, M. Imdad and D. Gopal, Some non-unique common fixed point theorems in symmetric spaces through CLR(S,T) property, **International Journal of Mathematics and Mathematical Sciences,** 2013 (2013), Article ID 753965.

4) **D.K. Patel**, P. Kumam and D. Gopal, Some discussion on the existence of common fixed points for a pair of maps, **Fixed Point Theory and Applications**, 2013 (2013), Article ID 187.

5) **D.K. Patel**, T. Abdeljawad and D. Gopal, Common fixed point of generalized Meir-Keeler -contractions, **Fixed Point Theory and Applications**, 2013 (2013), Article ID 260.

6) T. Dosenovic, P. Kumam, D. Gopal, **D.K. Patel** and A. Takaci, On fixed point theorems involving altering distances in Menger probabilistic metric spaces, **Journal of Inequalities and Applications**, 2013 (2013), Article ID 576.
7) D. Gopal and **D.K. Patel**, An alternative approach to "fixed point theorems for occasionally weakly compatible mappings", **Journal of the Egyptian Mathematical Society**, 22(3) (2014), 481-483.

8) D. Gopal, C. Vetro, M. Abbas and **D.K. Patel**, Some coincidence and periodic points results in a metric space endowed with a graph and applications, **Banach Journal of Mathematical Analysis**, 9(3) (2015), 128-139.

9) D. Gopal, M. Abbas, **D.K. Patel** and C. Vetro, Fixed points of α-type *F*-contractive mappings with an application to nonlinear fractional differential equation, **Acta Mathematica Scientia**, 36B(3), (2016), 1-14.

Dilip Jain

Reg No. D14MA004

Ph.D (Persuing) : July 2014 (Joined)

Papers Published :

1) **Dilip Jain**, Anantachai Padcharoen, Poom Kumam, and Dhananjay Gopal , *A New Approach to Study Fixed Point of Multivalued Mappings in Modular Metric Spaces and Applications*, **Mathematics MDPI**.

Lokesh M. Budhia

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Ph.D (Persuing): Aug 2014 (Joined)

Papers Published :

1) **Lokesh Budhia**, Poom Kumam, Juan Martinez-Moreno and Dhananjay Gopal, *Extensions of almost-F and F-Suzuki contractions with graph and some applications to fractional calculus*, **Fixed Point Theory and Applications** 2016:2, **DOI**: 10.1186/s13663015-0480-5.

2) **Lokesh Budhia**, Mehmet Kir, Dhananjay Gopal, Hukmi Kiziltunc, *New fixed point results in rectangular metric space and application to fractional calculus*, **Tbilisi Mathematical Journal** 10(1) (2017), pp.91–104.

3) P. Kumam, D. Gopal, **L. Budhia**, *A new Fixed point theorem under Suzuki type Z-contraction mappings*, **Journal of Mathematical Analysis**, Volume 8 Issue 1(2017), pages 113 – 119.

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