

CURRICULUM VITAE

Dr. Dhiren Kumar Basnet

Associate Professor

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Current Research:

- Clean and Nil clean rings, Commutativity degree of finite rings.

Positions:

- **Associate Professor**
 - **Institute:** Tezpur University, Assam, India
 - **Joining:** 5th August 2011
- **Senior Lecturer**
 - **Institute:** D.H.S.K. College, Dibrugarh, Assam
 - **Tenure:** 2nd August 2011 - 4th August 2011
- **Reader (On lien)**
 - **Institute:** Assam University, Silchar, Assam
 - **Tenure:** 3rd August 2009 - 1st August 2011
- **Senior Lecturer**
 - **Institute:** D.H.S.K. College, Dibrugarh, Assam
 - **Tenure:** 9th September 2006 - 2nd August 2009
- **Lecturer**
 - **Institute:** D.H.S.K. College, Dibrugarh, Assam
 - **Tenure:** 9th September 1998 - 8th September 2006

Educational Qualifications:

- **Doctor of Philosophy (Ph.D.) Mathematics, 2005**
 - **Topic:** Fuzzy Algebra.
 - **Institute:** Dibrugarh University, Dibrugarh, Assam, India.
- **Master of Sciences (M.Sc.) Mathematics, 1997**
 - Rank - 1, Gold Medalist.
 - Gauhati University, Guwahati, Assam, India.
- **Bachelor of Sciences (B.Sc.) Mathematics, 1994**
 - Rank - 5 in Gauhati University.
 - Goalpara College (Under Gauhati University), Goalpara, Assam India.

- **Higher Secondary, Science, 1991**
– Goalpara College, Goalpara, Assam India.
- **Matriculation, 1989**
– Baladmari High School, Goalpara, Assam India.

Publications (Journals):

- *Weakly r -clean rings and weakly $*$ -clean rings*, ***Scientific Annals of the Alexandru Ioan Cuza University of Iasi (NS). Mathematics*** (accepted) (with Ajay Sharma)
- *Some bounds for commuting probability of finite rings*, ***Proceedings-Mathematical Sciences*** (accepted) (with Jutirekha Dutta)
- *On generalized non-commuting graph of a finite ring*, ***Algebra Colloquium* 25 : 1 (2018) 149-160**, DOI: 10.1142/S100538671800010X, (with Jutirekha Dutta and R. K. Nath)
- *Nil clean graphs of rings*, ***Algebra Colloquium***, 24 : 3 (2017) 481-492, DOI: 10.1142/S1005386717000311 (with J. Bhattacharyya)
- *On commuting probability of finite rings*, ***Indagationes Mathematicae***, 28 (2), 372-382, 2017, DOI : 10.1016/j.indag.2016.10.002, (with Jutirekha Dutta and R. K. Nath)
- *A note on n -centralizer finite rings*, ***Analele Stiintifice Ale Universitatii Al I Cuza Din Iasi-Serie Noua-Matematica*** (In Press) (with Jutirekha Dutta and R. K. Nath)
- *Nil clean index of rings*, ***International Electronic Journal of Algebra* 15 (2014) 145 -156** (with J. Bhattacharyya).
- $(\epsilon, \epsilon \vee q)$ -Fuzzy Ideals of BG-algebra, ***International Journal of Algebra***, Vol.5, 2011, no. 15, 703 -708. (With L. B. Singh)
- *A note on Intuitionistic Fuzzy Equivalence Relation*, ***International Mathematical Forum***, Vol. 5, 2010, no. 67, 3301 - 3307. (With N. K. Sarma).
- (α, β) -cut of Intuitionistic Fuzzy Ideals, ***International Journal of Algebra***, Vol. 4, 2010, no. 27, 1329 - 1334.
- *Intuitionistic Fuzzy Ideals*, ***Journal of Fuzzy Mathematics***, Vol. 15, No. 4, 2007, 811 - 819.
- *Intuitionistic Fuzzy Projective and Injective submodule*, ***Journal of Fuzzy Mathematics***, Vol. 15, No. 4, 2007, 821 - 828.
- *Intuitionistic Fuzzy Subrings and Ideals*, ***Journal of Fuzzy Mathematics***, Vol. 11, No. 1, 2003, 139 - 155. (With B. Banerjee).
- *Intuitionistic fuzzy divisible and pure submodule*, ***Advances in Fuzzy Mathematics***, 12 (1), 77-91, 2017 (with Devanjan Hazarika)

Submitted:

- *Weak Nil Clean Ideal* (with Ajay Sharma)
(arXiv preprint arXiv:1810.01282)
- *Nilpotent Graph* (with Ajay Sharma and Rahul Dutta)
(arXiv preprint arXiv:1804.08937)
- *Nil Clean Ideal* (with Ajay Sharma)

(arXiv preprint arXiv:1709.02065)

- *Weakly nil clean graphs of rings* (with Ajay Sharma and J. Bhattacharyya)
(arXiv preprint arXiv: arXiv:1705.07677)
- *Weakly clean ideal* (with Ajay Sharma)
(arXiv preprint arXiv:1704.08814)
- *On non-commuting graph of a finite ring* (with Jutirekha Dutta)
(arXiv preprint arXiv:1703.05039)
- *Formal triangular matrix ring with nil clean index 4* (with J. Bhattacharyya)
(arXiv preprint arXiv:1702.02298)
- *Weak clean index of a ring* (with J. Bhattacharyya)
(arXiv preprint arXiv:1612.08357)
- *Characterizing some rings of finite order* (with Jutirekha Dutta and R. K. Nath)
(arXiv preprint arXiv:1510.08207)

Preprint:

- *Weak Nil Clean Rings* (with J. Bhattacharyya)
(arXiv preprint arXiv:1510.07440).

Publications (Proceedings):

- *Relative non-commuting graph of a finite ring* , **Proceedings of 50th symposium on ring theory and representation theory, Japan, 7th – 10th October, 2017, University of Yamanashi, Japan** p 40-46 (With Jutirekha Dutta).
- *More on Intuitionistic fuzzy ideals with thresholds (α, β) of rings*, **Proceedings of International Workshop on Fuzzy Sets, Rough Sets, Uncertainty Analysis and Applications, 21st – 25th November, 2011, organized jointly by ISI Kolkata and dept. of Mathematics, NIT Durgapur, West Bengal** (With L. B. Singh).
- *Fuzzy Superfluous Submodule*, **Proceeding of The 6th IMT GT International conference on Mathematics, Statistics and its applications (ICMSA 2010), 3 - 4 November, 2010, Kuala Lumpur, Malaysia**, 330 - 335.(With N.K. Sarma and L.B. Singh)
- *IFM of IF Goldie Dimension*, **Proceedings of the Annual Conference of KMA and National Seminar on Fuzzy Mathematics and Applications, Kerala, India, 2004**, 131 - 143.
- *Intuitionistic Fuzzy Essential Submodules*, **Proceedings of the International Symposium on Mathematics and its Application 2002 (Dept. of pure Mathematics, University of Calcutta, Kolkata)**, 113 - 124.

Book Published:

- *Topics in Intuitionistic Fuzzy Algebra*, **LAP Lambert Academic Publishing Germany**, 2011, ISBN - 3844391479.

Research Scholars

At Tezpur University:

- **Dr. J. Bhattacharyya** (A STUDY OF CLEAN AND NIL CLEAN PROPERTIES OF RINGS), Degree awarded by Tezpur University on 16th March, 2018.
- **Dr. Jutirekha Dutta** (COMMUTATIVITY DEGREE OF FINITE RINGS), Degree awarded by Tezpur University on 5th September, 2018.
- **Mr. Ajay Sharma** (CERTAIN CLASSES OF CLEAN RINGS), ongoing at Tezpur University.
- **Mr. Himangshu Hazarika**, ongoing at Tezpur University.

At Assam University:

- **Dr. L. B. Singh** (A STUDY OF RINGS, MODULES AND DIFFERENT KINDS OF ALGEBRAS IN FUZZY SETTINGS), Degree awarded by Assam University Silchar on 22th September 2014.
- **Dr. Saidur Rahman Barbhuiya** (A STUDY OF ABSTRACT ALGEBRAS IN FUZZY SETTINGS), Degree awarded by Assam University Silchar on 3rd September 2016.
- **Dr. Devanjan Hazarika** (ON FUZZY ALGEBRAIC STRUCTURES), Degree awarded by Assam University Silchar on 14th December 2017.
- **Mr. Ananta Dutta** (A STUDY ON SOME TOPIC ON FUZZY ALGEBRAIC STRUCTURE), Degree awarded by Assam University Silchar on 12th October 2018.

Invited Talk / Resource Person

- Resource person in the TPM (Training Programme in Mathematics)(Level-1) 2018 of D.A.E. Govt. of India at NISER Bhubaneswar during 4th June - 16th June, 2018.
- Delivered a series of 5(five) lectures on *Rings and Modules* to the teachers and research scholars of NEHU, Shillong, as a Visiting Professor under the UGC SAP DRS II programme in Mathematics, during 22nd - 25th March 2018.
- Resource Person in the Mini MTTS program of the National Board for Higher Mathematics at Tezpur University, during 3rd - 8th January, 2018.
- Invited talk on Srinivasa Ramanujan and interaction with the students and faculty members of GIMT Tezpur on the eve of National Mathematics Day Celebration organized by GIMT, Tezpur on 22 December 2017.
- Delivered an Invited talk on "Current Trends in Ring Theory" at NIT Nagaland on 15th September, 2017.
- Resource person in the "Innovative and Contemporary Teachers Training Program"(ICTM)(Under PMMMNTT, DHE, GoI) at NIT Silchar during 14th August - 18th August, 2017.
- Resource person in the TPM (Training Programme in Mathematics)(Level-1) 2017 of D.A.E. Govt. of India at NISER Bhubaneswar during 5th June - 17th June, 2017.
- Resource Person in the Mini MTTS program of the National Board for Higher Mathematics at Mizoram University, during 14th - 17th December, 2016.
- Resource person in the TPM (Training Programme in Mathematics)(Level-2) 2016 of D.A.E. Govt. of India at NISER Bhubaneswar during 6th June - 18th June, 2016

- Resource person in the MTTS program (Level-I) of the National Board for Higher Mathematics at IIT Madras, Chennai, during 23rd May - 5th June, 2016.
- Resource person in the TPM (Training Programme in Mathematics)(Level-1 and 3) 2015 of D.A.E. Govt. of India at NISER Bhubaneswar during 8th June - 20th June, 2015
- Resource person in the MTTS program (Level-0) of the National Board for Higher Mathematics at Goa University, during 11th May - 23rd May, 2015.
- Delivered a series of seven (7) lectures on *Real Analysis and Linear Algebra* in the Workshop on Algebra and Analysis from 17th to 23rd February, 2015, sponsored by NBHM at Tezpur University.
- Delivered a series of three (3) lectures *Real Analysis* in the One week Faculty Development Programme for the teachers of Mathematics in degree colleges (having major in Mathematics) of Assam from 12th to 18th December 2014 (sponsored by UGC-SAP(DRS-I)) at Tezpur University.
- Resource person in the MTTS program (Level-0) of the National Board for Higher Mathematics at IIT, Guwahati during 23rd June -5th July, 2014.
- Delivered an invited talk on *Construction of Real number system* at D.H.S.K. College, Dibrugarh, Assam on September 21, 2013.
- Delivered a series of two lectures on *Real Analysis* in the Workshop on Undergraduate Algebra, Analysis and its Applications for North East, organized Jointly by the Indian Statistical Institute, North East Centre and the Department of Mathematical Sciences, Tezpur University, March 28 to April 03, 2013 sponsored by Indian Statistical Institute and a UGC-SAP (DRS-I) of Tezpur University.
- Resource person in the MTTS program (Level-0) of the National Board for Higher Mathematics at IIT, Guwahati during 14-26 May, 2012.
- Delivered a one hour invited talk on *Almost Nil clean rings* in the National conference on Emerging trends in Mathematics and its applications D.A.V. College Jalandhar (Punjab), 4th February to 6th February, 2012.
- Delivered a series of six lectures in a six day NBHM sponsored workshop (Mathematical Excursion) for Mathematics Olympiad for the students of Class IX, X, XI, XII and school teachers organized by Assam Academy of Mathematics at NIT Silchar from 30th June to 5th July 2011.
- Delivered a series of two lectures in a 2 day workshop for PGT and TGT teachers of all Kendriya Vidyalayas of North East for Mathematics Olympiad in KV Srikona, Silchar, Assam on 19th and 20th February 2010.
- Resource person in INSPIRE a programme of DST, Govt. of India, for students of Higher secondary of all Assam in Assam University, Silchar from 4th to 10th February, 2010.
- Resource person in the MTTS program (Level-0) of the National Board for Higher Mathematics at IIT, Guwahati during May - June, 2007.
- Delivered a series of four lectures on *Real Analysis* in a 7-day workshop for graduate level students of different colleges under Dibrugarh University at the Department of Mathematics, Dibrugarh University, Organised by META (Mathematics Education Trust of Assam), 2004-05.

Conference/Seminar/workshop attended:

- *50th symposium on ring theory and representation theory*, 7 - 10 October, 2017, University of Yamanashi, Japan.
- International Workshop on *Fuzzy Sets, Rough Sets, Uncertainty Analysis and Applications*, 21st – 25th November, 2011, organised jointly by ISI Kolkata and dept. of Mathematics, NIT Durgapur, West Bengal.
- *The 6th IMT - GT International conference on Mathematics, Statistics and its applications (ICMSA 2010)*, 3 - 4 November, 2010, Kuala Lumpur, Malaysia,
- International Workshop on *Computational methods and Function Theory* (CMFT, 2008), IASST, Guwahati, 3 -10 January, 2008.
- Workshop on *Mathematical Programming and related topics on Optimization Methods, Application and Practices* organized by ISI Kolkata jointly with the Department of Statistics, Dibrugarh University, at Dibrugarh University, 12 - 14 November, 2007.
- Workshop on *Some Recent Trends in Application of Mathematics*, Department of Mathematics, Dibrugarh University, 9 - 10 March, 2006
- *Regional Seminar on Mathematics*, Department of Mathematics, Dibrugarh University, 10th January, 2005.
- *The Annual Conference of Kerala Mathematical Association and National Seminar on Fuzzy Mathematics and Applications*, Kerala, India, 8 - 10 January, 2004.
- *International Symposium on Mathematics and its Application*, Department of Pure Mathematics, University of Calcutta, Kolkata, India, 13 -15 November, 2002.
- *89th Session of Indian Science Congress 2002*, Lucknow University, Lucknow, India.
- *Turn of the Millennium Lectures in Mathematics, Functional Analysis: Current Directions*, IIT Guwahati, 20 - 24 December, 1999.

Seminar/workshop organised:

- *Mini MTTS* from 3rd to 8th January, 2018, sponsored by NBHM at department of Mathematical Sciences, Tezpur University.
- *Workshop on Algebra and Analysis* from 17th to 23rd February, 2015, sponsored by NBHM at Tezpur University.
- One week *Faculty Development Programme* for the teachers of Mathematics in degree colleges (having major in Mathematics) of Assam from 12th to 18th December 2014 (sponsored by UGC-SAP (DRS-I)) at Tezpur University.
- Workshop on *Undergraduate Algebra, Analysis and its Applications for North East*, organised Jointly by the Indian Statistical Institute, North East Centre and the Department of Mathematical Sciences, Tezpur University, March 28 to April 03, 2013 sponsored by Indian Statistical Institute and a UGC-SAP (DRS-I) of Tezpur University.
- Conducted a Six day NBHM sponsored workshop (Mathematical Excursion) on Mathematics for the students of Class IX, X, XI, XII and school teachers organized by Assam Academy of Mathematics at NIT Silchar from 30th June to 5th July 2011.

Reviewer

- Mathematical Reviews (AMS).
- Annals of Fuzzy Mathematics and Informatics.
- An. Univ. Oradea, Fasc. Mat.(Analele Universitatii din Oradea. Fascicola Matematica)
- Mathematical Forum
- Transactions of A. Razmadze Mathematical Institute (Elsevier)
- Boletim da Sociedade Paranaense de Matemtica

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