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## **Deepak Basyal, Ph.D.**

Department of Mathematics and Statistics

Coastal Carolina University

Conway, SC 29528

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### **Education**

*Ph.D. in Mathematics*, August 2015

New Mexico State University, Las Cruces, NM

Advisors: Patricia Baggett, David Pengelley

*Masters of Science, Mathematics*, December 2010

New Mexico State University, Las Cruces, NM

*Masters of Arts, Mathematics*, January 2004

Tribhuvan University, Kathmandu, Nepal

### **Research Interests**

History of Mathematics, Mathematics Education, Textbook Analysis, Ethnomathematics,  
Research in Undergraduate Mathematics Education.

### **Professional Experience**

08/16/20 – current **Assistant Professor of Mathematics**, Coastal Carolina University, Conway,  
SC

#### **Courses taught**

Discrete mathematics for middle school	Spring 22
Geometry for Middle School Teachers	Fall 21
Algebraic Thinking for Middle School Teachers	Fall 22, 21, 20
Problem Solv Strategies for Middle Scl Teachers	Spring 22, 21
CalculusIA	Fall 22, 21, 20; Spring 21
CalculusIB	Fall 22, Spring 21
Business Calculus	Summer 21
PreCalculus	Fall 2020

08/26/15 – 08/15/20 **Assistant Professor of Mathematics**, University of Wisconsin-Milwaukee,  
West Bend, WI

### Courses taught

Elementary Algebra	Summer 17
Mathematical Literacy for College Students I	Fall 2019
Mathematical Literacy for College Students II	Fall 2019
Quantitative Reasoning	Spring 19
College Algebra	Spring 19,17,16; Fall 19,17,16,15
Trigonometry	Spring 20,18,17; Fall 15
Elementary Statistics	Spring 16
Mathematics for Elementary Teachers	Spring 18
Calculus for Business and Biological Sciences	Fall 18,17
Calculus and Analytical Geometry I	Spring 20,18; Fall 16,15
Calculus and Analytical Geometry II	Spring 17,16; Fall 19,18
Calculus and Analytical Geometry III	Fall 17; Spring 20,19

01/01/2009 – 08/25/2015 **Graduate Teaching Assistant**, New Mexico State University, NM

### Courses taught

Calculus I	Summer 14
Calculus for Biological and Management Sciences	Summer 15, Spring 10
College Algebra	Summer 13, Fall 09
Intermediate Algebra	Spring 11, Fall 14,10
Fundamentals of Elementary Mathematics I	Spring 13, Fall 12
Fundamentals of Elementary Mathematics II	Fall 13

08/21/2008 – 12/31/2008 **Graduate Teaching Assistant**, Marshall University, WV

### Courses taught

College Algebra	Fall 2008
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02/15/2006 – 08/23/2007 **Lecturer**, Patan Multiple Campus, Tribhuvan University, Nepal

### Courses taught

Calculus and Analytical Geometry I (undergraduate), Introduction to Real Analysis (undergraduate)

01/20/2007 – 05/23/2007 **Lecturer**, Ratna Rajya Campus, Tribhuvan University, Nepal

### Courses taught

Calculus and Analytical Geometry I (undergraduate)

02/15/2005 – 08/23/2008 **Teacher**, Kathmandu Model Higher Secondary School, Nepal

### Courses taught

Basic Mathematics I (Grade XI)	2005, 2006, 2007, 2008
Basic Mathematics II (Grade XII)	2006, 2007, 2008
Business Mathematics (Grade XI)	2006, 2007, 2008
Mathematics and Statistics for Business	2007, 2008

## Publications

### Published:

- **Deepak Basyal**, and Bhesh Mainali, “*Mathematics textbook: motivation, experiences, and didactical aspect from authors’ perspectives*”. *Research in Mathematics Education*. DOI: <https://doi.org/10.1080/14794802.2022.2086608>. July 2022.
- **Deepak Basyal**, Dusty Jones and Mohan Thapa, “*Cognitive Demand of Mathematics Tasks in Nepali Middle School Mathematics Textbooks*”. *Int J of Sci and Math Educ* . DOI: <https://doi.org/10.1007/s10763-022-10269-3>. April 2022.
- Kedar Nepal, Krishna Pokharel, **Deepak Basyal**, Debendra Banjade and Manoj Lamichhane, “*What are possible sources of common and persistent student errors in algebra and calculus?*”. *Mathematics Education Forum Chitwan*, 6(6), 8-29, ISSN: 2645-8500 (Print). Dec 2021.
- **Deepak Basyal**, “*A mathematical poetry book from Nepal*”. *British Journal of History of Mathematics*. 35(3), 189-206 DOI: <https://doi.org/10.1080/26375451.2020.1777781>. Aug 2020.
- Kedar Nepal, Khyam Paneru, and **Deepak Basyal**, “*Minor Treatment But Sizeable Impact: A Study on Calculus Students’ Usage of Web-based Homework*” . *College Student Journal*, 54(1), 43-56. March 2020.
- **Deepak Basyal**, “*Description Old Nepali mathematics books and Their Potential to improve current day teaching and learning*” In É. Barbin, U. T. Jankvist, T. H. Kjeldsen, B. Smestad & C. Tzanakis (Eds.). *Proceedings of the Eighth European Summer University on History and Epistemology in Mathematics Education (ESU-8) (Skriptserie 2019, nr 11)*. Oslo: Oslo Metropolitan University (ISBN 978-82-8364-212-4 (online version)) pp. 697-710, Nov 2019.
- Dusty L Jones, and **Deepak Basyal**, “*An analysis of the statistics content in Nepali school textbooks*” *Mathematics Education Forum Chitwan*, 4(4), 21-34, ISSN: 2645-8500 (Print). Sep 2019.
- **Deepak Basyal**, “*Pandey’s method of cube root extraction: Is it better than Aryabhata’s method?*” In L. Radford, M. Furingetti, and T. Hausberger. *International study group on the relation between the history and pedagogy of mathematics proceedings of the 2016 ICME satellite conference*. Montpellier, France. p. 757, 2016.

### Submitted:

- **Deepak Basyal**, and Bhesh Mainali, “*Investigating The Features of Nepali 8th Grade Mathematics Textbook*”. (The Fourth International Conference on Mathematics Textbook Research and Development (ICMT 4) proceedings paper-expected to appear in December 2022)
- **Deepak Basyal**, “*Tikaram and Chandrakala Dhananjaya: A Collaborative Couple in Mathematics from 1930s Nepal*”. (a book chapter final draft submitted on October 29, 2022)
- **Deepak Basyal**, and Der-Ching Yang, “*Algebra Problems in Middle School Textbooks from Six Countries*”. (submitted to *Educational Studies in Mathematics* on 8/5/2022–revision in progress)

Projects in progress:

- Kedar Nepal, **Deepak Basyal**, and Bhesh Mainali, “How do international faculty change their beliefs about their teaching of mathematics in the US?”.
- **Deepak Basyal**, Kedar Nepal, Bhesh Mainali and Krishna Pokhrel “Higher Order Thinking Skills: An Investigation of High School Mathematics Board Exams in Nepal”.
- **Deepak Basyal** and Mohan Thapa “A review of calculus teaching in Nepal”.

## Conference Presentations

- 06/2022 Presented a paper (virtually) “Investigating The Features of Nepali 8th Grade Mathematics Textbook”, in **The Fourth International Conference on Mathematics Textbook Research and Development (ICMT 4)**, November 14-14, 2022, Beijing, China.
- 06/2022 Presented a paper “Are Mathematics Textbooks In Nepal Serving Their Purpose?”, in **National Conference of Mathematics and Its Applications**, June 11-13, 2022, Ilam, Nepal.
- 04/2021 Presented a paper “Marriage, mathematics and poetry: A story of collaboration in mathematics from 1930s Nepal”, in **Marriages, Couples, and the Making of Mathematical Careers**, April 29-30, 2021. Virtual.
- 01/2020 Presented a paper “Students’ Non-attendance to the Mathematical Meanings of the Symbols and their Common Errors in Calculus Courses”, in **Joint Mathematics Meetings**, January 14-17, 2020, Denver, Colorado.
- 09/2019 Presented a paper “Mathematical verses in Nepali”, in **AMS Fall Central Sectional Meetings**, September 14-15, 2019, Madison, Wisconsin.
- 06/2019 Presented a paper “What Statistical Content Children Learn in Nepal: An Analysis of Five Textbook Series Currently in Use in Nepali Schools”, in **Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019)**, June 26-29, 2019, Pokhara, Nepal.
- 04/2019 Presented a paper “Primary historical sources: A resource for student motivation and learning”, in **Mathematical Association of America Wisconsin Section Meeting**, April 12-13, Kenosha, WI.
- 01/2019 Presented a paper “Napier, Todhunter and Nayaraj Pant: A discussion on ‘The Rules of Circular Parts’”, in **Joint Mathematics Meetings**, Baltimore, Maryland.
- 07/2018 Presented a paper “Old Nepali mathematics books in modern day teaching and learning of mathematics”, in **8th European Summer University on History and Epistemology in Mathematics Education.**, July 20-24, 2018, Oslo, Norway.
- 07/2018 Presented a paper “Comparative study of Algebra and Calculus Curriculums in USA and Nepal”, in **Role of Nepali Diaspora in Higher Education in Nepal: Toronto Intl’ Conference**, July 7-8, 2018, Toronto, Canada.

- 01/2018 Presented a paper “*Singing sines in Sanskrit Ślokas*”, in **Joint Mathematics Meetings 2018**, January 2018, San Diego, California.
- 06/2017 Presented **Keynote** paper “*Can Nepali Historical Sources of Mathematics be used in the Teaching and Learning of Undergraduate Mathematics?*”, in **History and Recent Trends in Mathematics Conference**, June 2-4, 2017, Kathmandu, Nepal.
- 06/2017 Presented a paper with Kedar Nepal “*How Did American Mathematics Instructors of Nepali Origin Change Their Perspectives of Teaching and Learning of Undergraduate Mathematics?*”, in **History and Recent Trends in Mathematics Conference**, June 2-4, 2017, Kathmandu, Nepal.
- 10/2016 Presented a paper “*What can we learn by studying the early mathematics books from Nepal?*”, in **45th Annual Conference on South Asia**, October 2016, Madison, Wisconsin.
- 05/2016 Presented a paper “*Contents of early mathematics books in Nepal*”, in “*First International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016)*”, May 26-29, 2016, Kathmandu, Nepal.
- 01/2016 Presented a paper “*Uncommon mathematics from Tikārām Dhananjaya’s Śisubodha Tarangini*”, in **MAA Session on Incorporating the History of Mathematics into Developmental Math Courses, Joint Mathematics Meetings**, January 6-9, 2016, Seattle, WA.
- 11/2015 Presented a paper “*Possible uses of contents of two rare mathematics books from Nepal in the teaching of developmental mathematics*”, in **Project NeXT Wisconsin 2015**, November 7-8, Baraboo, Wisconsin.
- 01/2015 Presented a paper “*A 1933 mathematics and astrology book from Nepal, its content and backstory*”, in **MAA General Contributed Session on Ethnomathematics: A Tribute to Marcia Ascher, Joint Mathematics Meetings 2015**, January 10-13, San Antonio, Texas.
- 03/2015 Presented a paper “*Mystery from History: A 1933 Arithmetic and Astrology Book Śisubodha Taraṅgini from Nepal*”, in **Seventh Annual NeSA NMSU International Conference**, March 21, 2015, Las Cruces, New Mexico.
- 01/2011 Presented a paper “*Treatment of and trouble with zero in three centuries of American arithmetic*”, in **Joint Mathematics Meetings**, January 2011, New Orleans, Louisiana.
- 10/2010 Presented a paper “*Zero in the history of American arithmetic textbooks*”, in **Conference of International Study Group of History and Pedagogy of Mathematics, Americas section**, in October 2010, CalTech, Pasadena, California.
- 05/2010 Presented a paper “*Zero is a troublemaker*”, in **35th General meeting of Nepal Mathematical Society**, May 2010, Kathmandu, Nepal.

### Other Presentations

- 10/2020 Worked as a trainer to deliver training on “*Selecting Meaningful Questions for Mathematics Exams and Grading Meaningfully: Research and Best Practices*” in the workshop ‘Capacity Building Workshop on Research and Evaluation

in Mathematics (CBWREM-2020)” (October 10-11 and 14-15, 2020) organized by Nepal Mathematical Society. Virtual.

- 08/2019 Presented an invited talk on “*Mathematics and Poetry: There is a Connection*”, in **Nepal Mega College**, August 21, Kathmandu, Nepal.
- 08/2019 Presented an invited talk on “*Mathematics Education during Rana Regime in Nepal (1846-1951)*”, in **Martin Chautari**, August 20, Kathmandu, Nepal.
- 08/2019 Presented an invited talk on “*Creating an Active Learning Environment Using Primary Historical Sources*”, in **Department of STEAM Education**, School of Education, Kathmandu University, August 19, Lalitpur, Nepal.
- 08/2019 Facilitated a discussion program on “*Teaching Mathematics in Secondary Schools in Nepal*”, in **Aarungkhola Secondary School**, August 14, Nawalpur, Nepal.
- 07/2019 Presented a paper “*An Analysis of the Statistics Content in Nepali School Textbooks*”, in **Curriculum Development Center–Nepal**, July 26, Bhaktapur, Nepal.
- 07/2019 Presented an invited talk on “*Research in History and Pedagogy of Mathematics: Opportunities and Challenges for Nepali Scholars*”, in **Department of Mathematics Education, Tribhuvan University**, July 25, Lalitpur, Nepal.
- 07/2019 Presented an invited talk on “*Mathematics and Poetry: There is a Connection*”, in **LRI International School**, July 25, Kathmandu, Nepal.
- 03/2019 Presented an invited talk on “*Pi in Poetry: A 6th Century Sanskrit Verse for the Value of Pi*”, in **STEM Club Seminar**, UWM at Washington County, March 20, West Bend, WI.
- 06/2017 Provided training on “*Desmos Online Calculator in Teaching and Learning of Mathematics*”, Visual Aid in Teaching Mathematics and Statistics, in **Central Department of Mathematics**, June 1, 2017, Katmandu, Nepal.
- 02/2011 Presented an invited talk “*Treatment of and trouble with zero in three centuries of American arithmetic*”, in **STEM Club Seminar**, El Paso Community College February 16, 2011, El Paso, TX.

### Conference Organization

- 01/2021 Working as an Organizer for “*2023 Spring Meeting of the Southeastern Section of the Mathematical Association of America (MAA-SE-2023)*”, March 09-11, 2023, Conway, SC.
- 01/2021 Working as an Organizer for “*Third International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2023)*”, May 27-31, 2023, Pokhara, Nepal.
- 06/2019 Worked as an Organizer for “*Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019)*”, June 26-29, 2019, Pokhara, Nepal.
- 06/2019 Co-organizer, Math Education Sessions on Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019).

- 06/2019 Coordinator, Poster Session on Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019).
- 09/2018 Worked as an Organizer for “24th WisMATYC Annual Conference on September, 2018, University of Wisconsin-Milwaukee at Washington County.
- 05/2018 Worked as a member of Organizing Committee for “Workshop on Collaborative Research in Mathematical Sciences on May 25-27, 2018, Mercer University Georgia.
- 05/2016 Worked as a chair of Student Poster Presentation for “First International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016), May 26-29, 2016, Kathmandu, Nepal.
- 05/2016 Worked as a member of Organizing Committee for “First International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2016), May 26-29, 2016, Kathmandu, Nepal.
- 03/2014 Worked as a Conference Coordinator for “Sixth NeSA NMSU International Conference on ‘National Development: Opportunities and Challenges for the Diaspora’, March 22, 2014, Las Cruces, NM.
- 03/2013 Worked as a member of the organizing committee for “Fifth NeSA NMSU International Conference on Pragmatic Pathways to a Prosperous Nepal, March 23, 2013, Las Cruces, NM.

### **Conference/Training/Professional Development Participation**

- 09/2022 **101st National Council of Teachers of Mathematics conference/ US ICME**, Sept 29-Oct 01, 2022, Los Angeles.
- 06/2021 **AP Reader-Research**, June 03-09, 2022, Virtual.
- 06/2021 **AP Reader-Calculus**, June 11-18, 2021, Virtual.
- 08/2020 Worked as a breakout session leader in a workshop run by Ohio State University to train teachers from Nepal. In which we talked about “*origin of radian measure, sine function and limit of  $\sin x$  over  $x$  as  $x$  approaches 1*” using online Desmos calculator.
- 10/2020 **History of mathematics sessions**, October 27, 2020, Zoom, organized by British Society of History of Mathematics.
- 06/2020 **AP Reader-Calculus**, June 11-17, 2020, Virtual.
- 11/2019 **45th AMATYC Annual Conference**, November 14-17, Milwaukee, WI.
- 09/2019 **25th Annual WisMATYC Conference**, September 28, 2019, Wausau, WI.
- 06/2019 **Math Pathways Training by Carnegie Foundation**, June 20–21, 2019, Madison, WI.
- 06/2019 **AP Reader-Calculus**, June 11-18, 2019, Kansas City, MO.
- 11/2018 **44 AMATYC Annual Conference**, November 15-18, Orlando, FL.
- 05/2018 **Workshop on Collaborative Research in Mathematical Sciences**, May 25–27, 2018, Mercer University, Macon, GA.

- 01/2017 **Joint Mathematics Meeting 2017**, January 4-7, 2017, Atlanta, GA.
- 09/2016 **TRIUMPHS Workshop for Site Tester**, September 08-10, University of Colorado, Denver, CO.
- 05/2014 **Writing Across the Curriculum**, NMSU Teaching Academy, May 12-15, 2014, Las Cruces, NM.
- 06/2013 **Sixteenth Annual Legacy of R. L Moore Conference**, June 13–15, 2013, Austin, TX.
- 10/2010 **Poster Judge**, Alliance for Minority Participation Poster Session, Las Cruces, NM.
- 07/2009 **Conference on Modeling High Frequency Data in Finance**, July 2009, Hoboken, NJ.
- 04/2009 **Twelfth New Mexico Analysis Seminar**, April 23-25, 2009, Albuquerque, NM.
- 10/2008 **Fall meeting of the Mathematical Association of America**, October 24–25, 2008, Columbus, OH.
- 06/2007 **International Conference on the Teaching of Mathematical Modeling and Application (ICTMA)**, June 25–29, 2007, Kathmandu University, Dhulikhel, Nepal.
- 05/2007 **Summer School on Algebraic Geometry**, organized by Nepal Academy of Science and Technology (NAST), May 28–June 15, 2007, Kathmandu.

### University and Departmental Services

- Spring 2022-Current **Bachelor of Science in mathematics education committee**, Coastal Carolina University.
- Fall 2022-Current **Faculty Senate representative** College of Science, Coastal Carolina University.
- Fall 2021-Current **Assessment Coordinator** Department of Mathematics and Statistics, Coastal Carolina University.
- Spring 2021 **Assessment/Review working group** Department of Mathematics and Statistics, Coastal Carolina University.
- Spring 2021 **Prospective host committee–MAA-SE 2023**. Worked in the committee to create application to be host of Mathematical Association of America-South East Section meeting in spring 2023.
- Fall 2020 **Advised a student for Math 490 class at CCU** for history of mathematics project, poster and presentation
- Fall 2019 **Faculty Search Committee Member**, College of General Studies, UWM  
-Working as a member of Computer Science Faculty Search Committee.
- Fall 2019 **Faculty Steering Committee**, College of General Studies, UWM  
-Working as a member of Faculty Steering Committee Member for academic year 2019-2020.
- 08/2017 –present **Scholarship Committee**  
-Working as a member of Awards Committee (Washington County Foundation).



AY 2017/18	<b>Assessment Coordinator</b> Department of Mathematics, University of Wisconsin Colleges
AY 2017/18	<b>Student Life and Interest Committee (SLIC)</b> , University of Wisconsin-Washington County
AY 2017/18	<b>Coordinator</b> Professional Development and Grants Committee, Department of Mathematics, University of Wisconsin Colleges.
AY 2017/18	<b>Coordinator</b> Senate Instructional and Informational Technology Committee, University of Wisconsin Colleges.
AY 2017/18	<b>Coordinator</b> UW Colleges Integrator of the Year, Department of Mathematics, University of Wisconsin Colleges.
AY 2016/17	<b>member</b> Senate Instructional and Informational Technology Committee, University of Wisconsin Colleges.
AY 2015/16	<b>Associate Chair</b> , Department of Mathematics, University of Wisconsin–Marinette

### Leaderships/Memberships

01/2020 –04/2020	<b>President</b> , Wisconsin Mathematical Association of Two-Year Colleges (WisMATYC)
01/2019 –04/2020	<b>Vice President/President Elect</b> , Wisconsin Mathematical Association of Two-Year Colleges (WisMATYC)
10/2019 –present	<b>Member</b> , American Mathematical Association of Two-Year Colleges (AMATYC)
01/2013 –01/2017	<b>Vice President</b> , Association of Nepalese Mathematicians in America (ANMA)
01/2011 –01/2013	<b>Secretary</b> , Association of Nepalese Mathematicians in America (ANMA)
01/2010 –present	<b>Life Member</b> , ANMA
01/2008 –present	<b>Life Member</b> , Nepal Mathematical Society (NMS)
01/2010 –present	<b>Founding Member</b> , ANMA
01/2014-05/2015	<b>Graduate Senator</b> , Associated Students of NMSU (ASNMSU)
01/2014-05/2015	<b>Student Representative</b> , University Teaching Council, NMSU
AY 2013/14	<b>Secretary</b> , Mathematics Graduate Student Organization, NMSU
AY 2011/12	<b>President</b> , Mathematics Graduate Student Organization, NMSU
AY 2010/11	<b>Vice President</b> , Mathematics Graduate Student Organization, NMSU
AY 2002/03	<b>President</b> , Nepal Mathematics Student Association, Kathmandu, Nepal

### Awards and Honors

4/2021	<i>“Conference Support Award”</i> awarded by The Open University, United Kingdom to attend MathMarriage Conference (04/29/21).
1/2020	<i>“NSF/NCTM Travel Award”</i> awarded by National Science Foundation to attend 14th (International Congress on Mathematical Education) ICME 2020 (July 12-19) in Shanghai, China.

- 10/2019            “*UWM Faculty Distinguished Undergraduate Teaching Award*” awarded by Chancellor of University of Wisconsin-Milwaukee.
- 04/2016            “*Faculty Of The Year*” awarded by University of Wisconsin-Marinette.
- 02/2015            “*Outstanding Senator*” awarded by Associated Students of New Mexico State University.
- 05/2013            “*Outstanding Graduate Teaching Assistant* ” awarded by Department of Mathematics, NMSU.

**Research/Teaching Mini Grants**

- 05/2018            “*Summer Research Grant* ” awarded by Department of Mathematics, University of Wisconsin Colleges.
- 05/2017            “*Site Tester Honorarium*” awarded by NSF funded TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources (TRIUMPHS).
- 05/2017            “*Summer Research Grant* ” awarded by Department of Mathematics, University of Wisconsin Colleges.
- 03/2014            “*Walker Grant*” awarded by Department of Mathematics, New Mexico State University.

**Editor/reviewer**

- 11/2022            Associate editor–Annals of the TRIUMPHS Society
- 5/2022            International Conference on Mathematics Textbook Research and Development (ICMT-4)
- 3/2022- current    Journal on Mathematics Education (JME)
- 3/2022- current    Educational Studies
- 10/2021- current    British Journal of History of Mathematics
- 09/2019- current    MATH AMATYC Educator
- 06/2019            Journal of Humanistic Mathematics
- 09/2019            ICME14 (TSG 27: The role of the history of mathematics in mathematics education)