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RESEARCH INSTITUTE
FOR COMPUTATIONAL
MATHEMATICS AND PHYSICS
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MIDYEAR ACCOMPLISHMENT REPORT (January 2022 to June 2022)

Below are the highlights of accomplishments the Research Institute for Computational Mathematics and Physics (RICMP) from January 2022 to June 2022.

- ✓ The institute has conducted/attended the following board meeting/seminar/training-workshop:

Name of Seminars, Trainings, and Conferences	Date and Venue	Involvement	Acquired
RICMP Lecture Series 2 and Research Proposal Write-shop	Date: February 18-19, 2022 Venue(Virtual): Zoom	<i>Resource Speaker:</i> Dr. Cristina B. Corcino RICMP Researcher <i>Title of the Talk:</i> 1) Fourier Series of Some Special Functions; 2) Asymptotic Approximation of Some Special Functions Using Fourier Series	Tools and methodologies in conducting research on Generalization of Lambert W Function and Its Applications 9 Full-Blown Research Project Proposals
Board Meeting of the Mathematical Society of the Philippines (MSP)	Date: February 11, 2022 (3:30pm) Venue(Virtual): Zoom	Dr. Roberto B. Corcino <i>Board Member</i> <i>Chair of Selection Committee, MSP Research Awards</i>	Popularity of RICMP in the national community of math researchers Future research collaboration with other SUCs

<p>Lecture Series on Basic Calculus</p> <p>Outreach/Extension Program titled “Math for Senior High”</p>	<p>Date: March 18, 2022 Venue(Virtual): Zoom</p>	<p><i>Resource Speaker:</i> Dr. Roberto B. Corcino</p> <p><i>Title of the Talk:</i> The Derivative of a Function and Slope of Tangent Line</p>	<p>Popularity of RICMP in Cebu LGUs and DepEd-7</p>
<p>Board Meeting of the Mathematical Society of the Philippines (MSP) Region VII Chapter</p> <p>(Election of MSP Region VII Officers)</p>	<p>Date: March 19, 2022 Venue(Virtual): Zoom</p>	<p>Dr. Roberto B. Corcino <i>Board Member</i> <i>President of MSP Region VII Chapter</i></p> <p>Dr. Cristina B. Corcino <i>Board Member</i> <i>Vice-President of MSP Region VII Chapter</i></p> <p>Dr. Cris Armada <i>Board Member</i> <i>Secretary of MSP Region VII Chapter</i></p> <p>Dr. Edward Kiunisala <i>Board Member</i> <i>MSP Region VII Chapter</i></p>	<p>Popularity of CNU RICMP in Region VII community of math researchers</p> <p>Future research collaboration with other SUCs</p>
<p>Internationalization-by-Design Institutional Strategy and Policy Development</p>	<p>Date: April 1, 2022 Venue: EMMA Center, Cebu Normal University, Cebu City</p>	<p><i>Participant</i></p>	<p>Updates on CNU strategies on internationalization</p>
<p>Board Meeting of the Mathematical Society of the Philippines (MSP)</p> <p>(Preparation for the Upcoming MSP Annual Convention)</p>	<p>Date: April 4, 2022 (3:30pm) Venue(Virtual): Zoom</p>	<p>Dr. Roberto B. Corcino <i>Board Member</i> <i>Chair of Selection Committee, MSP Research Awards</i></p>	<p>Popularity of RICMP in the national community of math researchers</p> <p>Future research collaboration with other SUCs</p>
<p>Webinar on Ethics and Research in the Social Sciences</p>	<p>Date: April 11, 2022 Venue(Virtual): Zoom</p>	<p><i>Participant</i></p>	<p>Updates on ethics and research in the social sciences</p>
<p>Board Meeting of the Mathematical Society of the Philippines (MSP)</p> <p>(Updates on the Preparation for the Upcoming MSP Annual Convention)</p>	<p>Date: April 20, 2022 (3:30pm) Venue(Virtual): Zoom</p>	<p>Dr. Roberto B. Corcino <i>Board Member</i> <i>Chair of Selection Committee, MSP Research Awards</i></p>	<p>Popularity of RICMP in the national community of math researchers</p> <p>Future research collaboration with other SUCs</p>

CHED HEDF Regional Monitoring and Reconciliation Workshop	Date: April 26, 2022 Venue: Seda Central Bloc Cebu, Cebu City	<i>Participant</i>	Reconciliation of the liquidation report of the recently completed research projects of RICMP funded by CHED-GIA
PAGHAHABI: Interweaving Mathematics and Life A Seminar-Project of PhD Science Education (Math) students in West Visayas State University	Date: April 30, 2022 Venue(Virtual): Zoom	<i>Resource Speaker:</i> Dr. Roberto B. Corcino RICMP Director	Popularity of CNU RICMP in Visayas Region community of math researchers Future research collaboration with other SUCs
Board Meeting of the Mathematical Society of the Philippines (MSP) (Updates on the Preparation for the Upcoming MSP Annual Convention)	Date: May 4, 2022 (3:30pm) Venue(Virtual): Zoom	Dr. Roberto B. Corcino <i>Board Member Chair of Selection Committee, MSP Research Awards</i>	Popularity of RICMP in the national community of math researchers Future research collaboration with other SUCs
35th AUAP Annual Conference on Higher Education Challenges in the Post-COVID19 World	Date: May 13, 2022 Venue(Virtual): Zoom	<i>Participant</i>	Updates on Global Challenges and Problems in Higher Education, which are possible source of research problems
Writeshop on Synergizing and Launching of CNU's Research Directions	Date: May 18-20, 2022 Venue: Tandang Sora Hall, Cebu Normal University, Cebu City	<i>Participant</i>	New Research Agenda for Mathematics and Physics
2022 Mathematical Society of the Philippines (MSP) Annual Convention	Date: May 21, 28 and June 4, 2022 Venue(Virtual): Zoom	Dr. Roberto B. Corcino <i>Member, Board of Directors of MSP National Chair, Screening Committee of MSP Research Grant Member, Registration and Membership Committee</i> Dr. Cristina B. Corcino <i>Plenary Speaker</i>	Popularity of CNU RICMP in the community of math researchers in the Philippines Future research collaboration with other SUCs

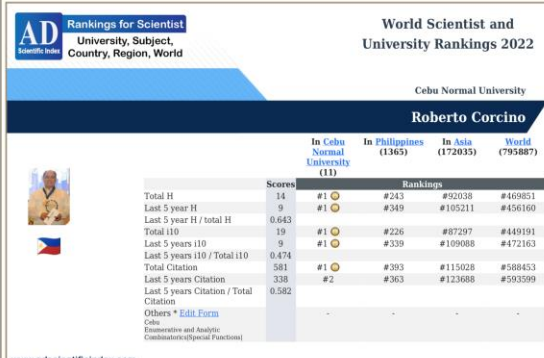
- ✓ The institute has four (4) published paper in international journals indexed by Web of Science and Scopus. Below are list of the completed/published researches:

Title	Status	Date of Completion/ Publication
<p><i>Integral Representation and Explicit Formula at Rational Arguments for Apostol–Tangent Polynomials</i></p> <p>Cristina B. Corcino, Baby Ann Damgo, Joy Ann Cañete and Roberto B. Corcino</p>	<p>Published</p> <p><i>Symmetry</i>, Volume 14 (2022), Article #35 https://doi.org/10.3390/sym14010035</p> <p>Indexed by Web of Science (Clarivate Analytics, Category: SCIE) and SCOPUS</p>	<p>January 2022</p>
<p><i>Asymptotic Approximation of the Apostol-Tangent Polynomials Using Fourier Series</i></p> <p>Cristina B. Corcino, Baby Ann Damgo, Joy Ann Cañete and Roberto B. Corcino</p>	<p>Published</p> <p><i>Symmetry</i>, Volume 14 (2022), Article #53 https://doi.org/10.3390/sym14010053</p> <p>Indexed by Web of Science (Clarivate Analytics, Category: SCIE) and SCOPUS</p>	<p>January 2022</p>
<p><i>Asymptotic Approximations of Apostol-Tangent Polynomials in terms of Hyperbolic Functions</i></p> <p>Cristina B. Corcino, Wilson Castañeda, Jr. and Roberto B. Corcino</p>	<p>Published Online</p> <p><i>Computer Modeling in Engineering and Sciences</i></p> <p>Indexed by Web of Science and SCOPUS</p>	<p>January 2022</p>
<p><i>Fourier Series for the Tangent Polynomials, Tangent–Bernoulli and Tangent–Genocchi Polynomials of Higher Order</i></p> <p>Cristina B. Corcino and Roberto B. Corcino</p>	<p>Published</p> <p><i>Axioms</i>, Volume 11 (2022), Article #86 https://doi.org/10.3390/axioms11030086</p> <p>Indexed by Web of Science (Clarivate Analytics, Category: SCIE) and SCOPUS</p>	<p>February 2022</p>

- ✓ The institute director, chairs, and RICMP research affiliates have earned the following H-index in the citation record released by Google Scholar:

Name	H-Index	i10-index	Number of Citations
Dr. Roberto B. Corcino	14	21	624
Dr. Cristina B. Corcino	10	10	266
Dr. Edward Kiunisala	5	5	105
Mr. Jay M. Ontolan	4	0	40
Mr. Allan Roy Elnar	2	1	17
Dr. Cris Armada	3	0	25

- ✓ The institute director (Dr. Roberto B. Corcino) and RICMP research affiliates (Dr. Cristina B. Corcino and Dr. Edward M. Kiunisala) have been ranked as Top 1, Top 3 and Top 9 Scientists in Cebu Normal University, respectively, and Top 243, Top 541 and Top 782 Scientists in the Philippines, respectively, as of March 11, 2022 according to AD Scientific Index Ranking for Scientist:



World Scientist and University Rankings 2022

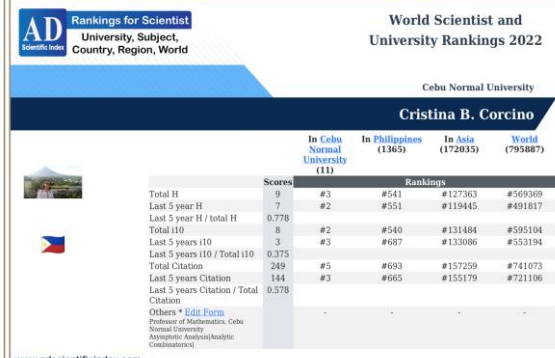
Cebu Normal University

Roberto Corcino

	Scores	Rankings			
		In Cebu Normal University (11)	In Philippines (1365)	In Asia (172035)	World (795887)
Total H	14	#1	#243	#52038	#469851
Last 5 year H	9	#1	#349	#105211	#456160
Last 5 year H / total H	0.643				
Total i10	19	#1	#226	#87297	#449191
Last 5 years i10	9	#1	#339	#109088	#472163
Last 5 years i10 / Total i10	0.474				
Total Citation	581	#1	#393	#115028	#588453
Last 5 years Citation	338	#2	#363	#123688	#593599
Last 5 years Citation / Total Citation	0.582				

Others * [Edit Form](#)
Cebu Normal University
Professor of Mathematics and Analytic Combinatorics (Special Functions)

www.adsscientificindex.com



World Scientist and University Rankings 2022

Cebu Normal University

Cristina B. Corcino

	Scores	Rankings			
		In Cebu Normal University (11)	In Philippines (1365)	In Asia (172035)	World (795887)
Total H	9	#3	#541	#127363	#569369
Last 5 year H	7	#2	#551	#119445	#491817
Last 5 year H / total H	0.778				
Total i10	8	#2	#540	#131484	#595104
Last 5 years i10	3	#3	#687	#133086	#553194
Last 5 years i10 / Total i10	0.375				
Total Citation	249	#5	#893	#157259	#741073
Last 5 years Citation	144	#3	#665	#155179	#721106
Last 5 years Citation / Total Citation	0.578				

Others * [Edit Form](#)
Cebu Normal University
Professor of Mathematics, Cebu Normal University
Asymptotic Analysis/Analytic Combinatorics

www.adsscientificindex.com

- ✓ The institute director (Dr. Roberto B. Corcino) and RICMP research affiliates (Dr. Cristina B. Corcino, Dr. Cris Armada and Dr. Edward M. Kiunisala) have been elected as officers/board members of the Mathematical Society of the Philippines – Region VII Chapter:

Dr. Roberto B. Corcino
Board Member
President of MSP Region VII Chapter

Dr. Cristina B. Corcino
Board Member
Vice-President of MSP Region VII Chapter

Dr. Cris Armada
Board Member
Secretary of MSP Region VII Chapter

Dr. Edward Kiunisala
Board Member
MSP Region VII Chapter

- ✓ The institute has nine (9) research projects approved by URAC. Table below provides status of the research project.

Title of the Research Project	Status	Funding Agency/Project Cost
<i>Degenerate Apostol-Type Poly-Genocchi Polynomials with Parameters a, b, and c</i>	Approved by the University Research Advisory Committee (URAC); MOA is for signature by CNU President;	CNU-RICMP Project Cost: PhP 200,000.00
Fourier Series and Integral Representation of Apostol-Frobenius-Euler Polynomials and Apostol-Frobenius-Genocchi Polynomials of Complex Parameters and Order α	Approved by the University Research Advisory Committee (URAC); MOA is for signature by CNU President;	CNU-RICMP Project Cost: PhP 200,000.00
Asymptotic Approximations of Apostol-Frobenius-Euler polynomials and Apostol-Frobenius-Genocchi polynomials in terms of Hyperbolic Functions	Approved by the University Research Advisory Committee (URAC); MOA is for signature by CNU President;	CNU-RICMP Project Cost: PhP 200,000.00
Asymptotic Approximations of Apostol-Frobenius-Euler Polynomials of order α in terms of Hyperbolic Functions	Approved by the University Research Advisory Committee (URAC); MOA is for signature by CNU President;	CNU-RICMP Project Cost: PhP 200,000.00
Asymptotic Approximations of Apostol-Frobenius-Genocchi Polynomials of order α in terms of Hyperbolic Functions	Approved by the University Research Advisory Committee (URAC); MOA is for signature by CNU President;	CNU-RICMP Project Cost: PhP 200,000.00

<p>Tangent Polynomials of Complex Order</p>	<p>Approved by the University Research Advisory Committee (URAC);</p> <p>MOA is for signature by CNU President;</p>	<p>CNU-RICMP Project Cost: PhP 200,000.00</p>
<p>Forcing Super Fair Domination and Forcing Disjoint Restrained Domination in Graphs</p>	<p>Approved by the University Research Advisory Committee (URAC);</p> <p>MOA is for signature by CNU President;</p>	<p>CNU-RICMP Project Cost: PhP 200,000.00</p>
<p>Construction of Fourier series Expansion of Apostol–Frobenius: Tangent, Bernoulli and Genocchi polynomials</p>	<p>Approved by the University Research Advisory Committee (URAC);</p> <p>MOA is for signature by CNU President;</p>	<p>CNU-RICMP Project Cost: PhP 200,000.00</p>
<p>Forcing Inverse Domination and Forcing Inverse Independent Domination in Graphs</p>	<p>Approved by the University Research Advisory Committee (URAC);</p> <p>MOA is for signature by CNU President;</p>	<p>CNU-RICMP Project Cost: PhP 200,000.00</p>

Prepared by:

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