

# KELVIN A. LAGOTA

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## SUMMARY

**Professional Teaching Experience, post-secondary level:** Since 2008

**Research Experience:** Since 2008

**Administrative Work Experience:** 2011 – 2015

### Current employment status

Dawson College (Part-time faculty), since January 2018

Institute of Mathematics, UPD (Senior Lecturer), since January 2021

### Immigration Status

Filipino citizen by birth.

Permanent Resident in Canada since June 2021

## EDUCATIONAL BACKGROUND

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| <b>2015-2019</b> | <b>Ph.D. Mathematics</b><br>Concordia University<br>Thesis: " <i>Green function and self-adjoint Laplacians on polyhedral surfaces</i> "<br>Supervisors: Alexey Kokotov, PhD and Victor Kalvin, PhD   |
| <b>2011-2015</b> | <b>Ph.D. Mathematics</b> (Withdrawn, transferred to Concordia U)<br>University of the Philippines Diliman   |
| <b>2008-2011</b> | <b>M.S. Mathematics</b><br>University of the Philippines Diliman<br>Thesis: " <i>Symmetric Expressions <math>M</math> of order <math>2n</math> with Essential Spectrum and Deficiency index <math>d(M)=n+3</math></i> "<br>Supervisor: Marian P. Roque, PhD |
| <b>2005-2008</b> | <b>B.S. Mathematics</b><br>University of the Philippines Diliman<br>Undergraduate Research: "On Approximation by Polynomials:<br>The Weierstrass Approximation Theorem"<br>Supervisor: Marian P. Roque, PhD   |

## RESEARCH PUBLICATIONS

- A. Kokotov, K. Lagota, Green function and self-adjoint Laplacians on polyhedral surfaces, *Canadian Journal of Mathematics*, Vol. 72(5), (2020), pp. 1324-1351. doi: 10.4153/S0008414X1900033
- K. Lagota, On the domain of the adjoint Laplacian on a compact Riemann surface with conical singularities, *Matimyas Matematika*, Vol. 43, No. 1, (2020), pp.1-18.
- M.P. Roque, G. Limson, K. Lagota, Non Limit-Point Symmetric Differential Expressions with Essential Spectrum, *Matimyas Matematika*, Vol. 30, Nos. 2-3 (2007), pp. 85-93.

## PRESENTATIONS IN CONFERENCES AND SYMPOSIA

- *Self-adjoint Laplacians on a compact Riemann surface with conical singularities and their determinants*, 2021 MSP<sup>1</sup> Annual Convention (virtual), May 2021
- *Symmetric Expressions of the Form  $My=(-1)^ny^{(2n)} + (cx^6y^{(4)})^{(4)} - (x^5y''')''' + (x^2y')'$* , (with MP Roque), 2012 MSP Annual Convention, De La Salle Lipa, Lipa City, Batangas, PHILIPPINES, May 2012
- *Symmetric Expressions  $M$  of order  $2n$  with Essential Spectrum and Deficiency Index  $n+3$* , (with MP Roque), The 6th SEAMS-GMU<sup>2</sup> International Conference on Mathematics and Its Applications, Universitas Gadjah Mada, Yogyakarta, INDONESIA, 12-15 July 2011
- *Symmetric Expressions of the Form  $My=(-1)^ny^{(2n)} + (cx^2y')'$* , (with MP Roque), 2011 MSP Annual Convention, University of Santo Tomas, Manila, PHILIPPINES, May 2011
- *Symmetric Expressions of order  $2n$  with Essential Spectrum and Deficiency Index  $n+3$* , (with MP Roque), 2009 MSP Annual Convention, Limketkai, Cagayan De Oro, Misamis Oriental, PHILIPPINES, May 2009

## SEMINARS, WORKSHOPS, AND SCHOOLS ATTENDED

- Focus Program Analytic Function Spaces and Their Applications, Fields Institute, Toronto, Canada, July – December 2021
- 2016 CRM Summer School on Spectral theory and applications, Laval University, Quebec, Canada, 4 – 14 July 2016
- CIMPA-NIMS<sup>3</sup> Research School on dynamical systems: Examples, billiards and the 3-body problems, Center for Applications of Mathematical Principle, Daejeon, South Korea, 25 May – 3 June 2015
- <sup>4</sup>CIMPA-ICIAM-IMU-CDC-Philippines Research School 2014: Partial Differential Equations: Analysis, Numerics, and Applications to Flood and Tsunamis, Institute of Mathematics, University of the Philippines Diliman, 23 June – 4 July 2014
- SEAMS Manila School on the Applications of Algebra and Analysis, Institute of Mathematics UP Diliman, 4-15 April 2011

## WORK EXPERIENCES

**Institute of Mathematics, University of the Philippines Diliman**  
**Senior Lecturer (part-time, equivalent to Assistant Professor)**

- *Second Semester 2021-2022*
  - Math 122: Differential Equations and Applications (remote teaching)
  - Math 11: College Algebra (remote teaching)
  - Math 14: Trigonometry (remote Teaching)
- *First Semester 2021-2022*
  - Math 122: Differential Equations and Applications (remote teaching)
  - Math 23: Elementary Analysis 3 (remote teaching)
- *Second Semester, 2020-2021*
  - Math 22: Elementary Analysis 2 (remote teaching, 2 sections)

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<sup>1</sup> Mathematical Society of the Philippines

<sup>2</sup> Southeast Asian Mathematical Society – Gadjah Mada University

<sup>3</sup> Centre International de Mathematiques Pures et Appliquees – National Institute for Mathematical Sciences

<sup>4</sup> [http://www.cimpa-icpam.org/IMG/pdf/manila%202014\\_mr.pdf](http://www.cimpa-icpam.org/IMG/pdf/manila%202014_mr.pdf)

**Mathematics Department, Dawson College**  
**Faculty (Continuing Education)**

• *Fall 2022*

- Calculus 1 (Science) 201-NYA-05
- Calculus 2 (Science) 201-NYB-05

• *Summer 2022*

- Linear Algebra (Science) 201-NYC-05
- Calculus 1 (Science) 201-NYA-05
- Remedial Activities for Secondary V Math 201-015-RE

• *Winter 2022*

- Applied Mathematics for Computer Science 201-920-DW

• *Fall 2021*

- Linear Algebra (Science) 201-NYC-05
- Financial Calculations 201-900-DW

• *Summer 2021*

- Linear Algebra (Science) 201-NYC-05 (delivered online)
- Remedial Activities for Secondary IV Math 201-016-RE (delivered online)
- Calculus 2 (Science) 201-NYB-05 (delivered online)

• *Winter 2021*

- Linear Algebra (Science) 201-NYC-05 (delivered online)
- Remedial Activities for Secondary IV Math 201-016-RE (delivered online, 2 sections)

• *Fall 2020*

- Linear Algebra (Science) 201-NYC-05 (delivered online)
- Business Mathematics 201-801-DW (delivered online)

• *Summer 2019*

- Linear Algebra (Social Science) 201-105-DW
- Calculus 1 (Social Science) 201-103-DW

• *Winter 2019*

- Calculus 2 (Science) 201-NYB-05

• *Fall 2018*

- Calculus 1 (Social Sciences/Commerce) 201-103-DW
- Remedial Activities for Secondary IV Math 201-016-50

• *Winter 2018*

- Linear Algebra (Science) 201-NYC-05
- Business Mathematics 201-801-DW

**Department of Mathematics & Statistics, Concordia University**  
**Grad Student Instructor, Teaching Assistant**

• *Winter 2019*

- Class Tutor (Algebra and Functions, Differential and Integral Calc 1)
- Tutor (Math Help Center)
- Marker (Linear Algebra and Applications II)

- *Fall 2018*
  - Teaching Assistant (Fundamental Concepts of Algebra) (online)
- *Winter 2018*
  - Class Tutor (Differential and Integral Calculus 1)
  - Tutor (Math Help Center)
  - Marker (Mathematical Modeling)
- *Fall 2017*
  - Lecturer (Differential and Integral Calculus 2)
- *Winter 2017*
  - Lecturer (Algebra and Functions)
- *Fall 2016*
  - Lecturer (Differential and Integral Calculus 2)
- *Summer 2016*
  - Class Tutor (Differential and Integral Calculus 2)
- *Winter 2016*
  - Lecturer (Differential and Integral Calculus 2)
- *Fall 2015*
  - Class Tutor (Differential and Integral Calculus 2)
  - Marker (Complex Analysis 1, Differential Equations)

**Institute of Mathematics, University of the Philippines Diliman**

***Instructor***

- Oct 2011 – July 2015                      Instructor 7
- Nov 2008 – Oct 2011                      Instructor 1
- **Math 53 (Elementary Analysis 1) Coordinator**, 2<sup>nd</sup> Semester AY 09-10
- **Co-Author/Co-Editor of Math 53 Module 1<sup>st</sup> Edition**

*Courses taught:*

- Trigonometry – 1x
- Algebra and Trigonometry – 5x
- Elementary Analysis 1 – 10x
- Elementary Analysis 2 – 6x
- Elementary Analysis 3 – 2x
- Precalculus – 3x
- Calculus 1 – 5x
- Calculus 2 – 3x
- Calculus 3 – 1x
- Differential Equations and Applications – 6x
- Undergraduate Research – 1x

**College of Science, University of the Philippines Diliman**

***Coordinator, National Service Training Program (NSTP)***

- June 2011 – July 2015

**OTHER ACTIVITIES AND APPOINTMENTS**

- Assistant Director, 14th Philippine Mathematical Olympiad
- Member, College of Science-NSTP Committee (2010-2015)

- Member, UPD-NSTP Executive Committee (2011-2015)
- Member of the local organizing committees of CIMPA School in Manila (2014) and SEAMS School in Manila (2011)
- Volunteer mentor at Diliman Learning Resource Center, UPD (2006-2008)