

# Jenkin Tsui

Department of Molecular Oncology  
BC Cancer Research Centre  
675 W 10th Avenue  
Vancouver, BC V5Z 1L3, Canada

Email: Jenkin.Tsui@yale.edu  
Web: jenkintsui.com

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## PERSONAL

Citizenship: Canadian  
GitHub ID: tsuijenk  
Google Scholar ID: rgDH5uQAAAAJ

## EDUCATION

**University of British Columbia**, Vancouver, British Columbia, Canada  
*Doctor of Philosophy*, Bioinformatics, 2020-2023  
*Supervisor*: Dr. Andrew Roth  
*Supervisory Committee*: Dr. Samuel Aparicio, Dr. Leonid Sigal, Dr. Alexandre Bouchard-Cote

**Yale University**, New Haven, Connecticut, United States

*Master of Arts*, Statistics, 2018-2019

*Supervisor*: Dr. David Pollard

*Relevant coursework*: Advanced Statistical Inference, Advanced Probability Theory, Linear Models, Neuroimaging Statistics, Nonparametrical Statistical Methods, Statistical Case Studies, Reading Course in Bayesian Methods in fMRI analyses

**University of Toronto**, Toronto, Ontario, Canada

*Honours Bachelor of Science with High Distinction*, Mathematics Specialist, Statistics Stream, Co-op, 2013-2018

GPA: 3.53, Major GPA: 3.81

**University of Michigan**, Ann Arbor, Michigan, United States

*Non-degree*, Mathematics and Statistics, Fall 2017

Exchange semester as a Killam Fellow sponsored by Fulbright Canada

## PAPERS AND PUBLICATIONS

### Conference Publications

[1] **Tsui, J.**, Dasylva, A. and Chu, K. (2017). Optimal Estimating Equation for Logistic Regression with Linked Data. arXiv:1707.05825

### Preprints

[2] **Tsui, J.** (2018). Ultrahigh-dimensional Variable Selection for Mammalian Eye Gene Expression.

### Contributions resulting from participation in industrially relevant R&D activities

[3] **Tsui, J.** (2015). Technical Report on Time Series Analysis of Fraudulent Behaviors related to Electronic Frauds at Bank of Nova Scotia (Internal Investigative Report completed under Technological Crimes and Forensic Unit at Bank of Nova Scotia in Summer 2015 as a Co-op student)

## TALKS

### Conference Presentations

[1] *Measuring Statistical Evidence Using Relative Belief*, MAA General Contributed Paper Session on Probability and Statistics, Joint Mathematics Meeting 2019, Baltimore, MD, United States, January 14-19, 2019. Abstract no. 1145-vt-834.

[2] *Optimal Estimating Equation for Logistic Regression with Linked Data*, MAA General Contributed Paper Session on Probability and Statistics, Joint Mathematics Meeting 2018, San Diego, CA, United States, January 8-13, 2018. Abstract no. 1135-vt-138.

[3] *Optimal Estimating Equation for Logistic Regression with Linked Data*, Canadian Undergraduate Mathematics Conference, Montreal, QC, Canada, July 19-23, 2017

#### Seminar Series

[4] *Measuring Statistical Evidence Using Relative Belief*, Seminars in Undergraduate Mathematics in Montreal, McGill University, Montreal, QC, Canada, January 13-15, 2017

#### Poster Sessions

[5] *Optimal Estimating Equation for Logistic Regression with Linked Data*, Michigan Student Symposium for Interdisciplinary Statistical Sciences, University of Michigan, Ann Arbor, MI, United States, April 2-3, 2018

#### RESEARCH INTERESTS

**Keywords of Interests:** Bayesian Nonparametric (BNP) modelling, spatial statistical methods, object detection, object segmentation, statistical evidence, statistical genetics, high Dimensional statistical learning methods, RNA secondary structures, clonal genotypes in cancer evolution

#### RESEARCH EXPERIENCE

Doctoral Research Scientist 2020-  
**Department of Molecular Oncology, BC Cancer Research Centre, Vancouver, British Columbia, Canada**

- Current project focuses on developing Bayesian Hierarchical Model to perform object segmentation
- Develop a Hybrid Gibbs Sampler that searches for local and global maximas to enhance the precision of identifying object centers
- Utilize MATLAB and Python to analyze RGB and gray-scale images
- Perform large scales iterations through BCCRC virtual machines
- Debug and optimize Python code through the use of Scipy, Numpy and Scikit-learn packages, k-d trees, profiling, and algormetered clustering
- Assist my supervisor in conducting peer review on papers submitted to academic journals
- Present at the weekly reading group. Topics include: machine learning methods, graphical models, and cancer research

Research Fellow 2019  
**Center for Integrative Medical Sciences, RIKEN, Yokohama, Japan**

- Worked as a member of the FANTOM6 project, under supervision of Dr. Michiel de Hoon, to research for transcriptome-wide base pairing interactions and the secondary leaf structures of long non-coding RNAs (lncRNAs)
- Utilized Bedtools and Samtools through shell scripting (Unix) alongside with R and Python to conduct analysis on DNA-seq and RNA-seq data
- Modeled RNA structures and performs statistical analyses on gene expression using the sequencing data from PARIS (Psoralen Analysis for RNA Interactions and Structures) [Lu et al., 2018] as well as its computational complement CRSSANT (Computational RNA Secondary Structure Analysis based on Network Techniques) [Fischer-Hwang et al., 2019]
- Conducted Gene Ontology (GO) analyses on the structural genes of both the RIKEN and Stanford datasets generated using the PARIS Protocol
- Analyzed the leaf structures and constraint patterns of lncRNAs using ViennaRNA software

Mathematical Statistician  
Statistics Canada, Ottawa, Ontario, Canada

2017

- Conducted record linkage research under the supervision of Dr. Abel Dasylyva and Dr. Kenneth Chu
- Improved on the estimating equation by Chipperfield et al. (2011) by writing mathematical proofs and running simulations using SAS and R
- Proposed an optimal likelihood estimating equation for logistic regression with linked data built upon the Quasi-Likelihood framework
- SAS was used to generate synthetic data sets and to conduct statistical analysis on relative bias and relative standard error comparing Tsuis and Chipperfields method
- Performed data analysis on record linkage under International Cooperation and Corporate Statistical Methods Division
- Prototyped to adjust for linkage errors in logistic regression with linked data

Research Assistant  
University of Toronto, Toronto, Ontario, Canada

2015-2016

- Worked with Professor Phani Radhakrishnan at the Department of Management
- Assisted in designing survey questions for research in organization behaviour
- Designed methods to collect data in an organized manner for statistical analysis
- Performed literature search on articles and research papers, information from which are used as references during statistical analysis and report writing

## INDEPENDENT STUDIES & RESEARCH

[1] **Independent Study**, Winter 2019: Under supervision of Dr. Joseph T. Chang, I was studying the recent advances in Bayesian methods for fMRI data. Particularly I conducted mathematical research and literature studies on Bayesian Nonparametric (BNP) modelling, such as: Chinese Restaurant Process (CRP) infinite mixture model and the Indian Buffet Process latent factor model. These models are adaptive to data complexity; they also express a generative process on data sets that include hidden variables and assume these hidden structures will grow. Then I simulated these models using Markov Chain Monte Carlo (MCMC) with Gibbs sampling used internally to optimize on the number of clusters. On the other hand, I also studied Bayesian Multilevel (BML) models, which involves partial pooling of subjects, Regions of Interests (ROIs), and samples, resulting in multiplicities being dissolved.

[2] **Independent Project**, Winter 2018: Under supervision of Dr. Javed Tomal, I conducted data collection, data cleansing, descriptive statistics, data analyses, methods research, and the write up of the manuscripts. I investigated the performances of five variable selection methods: bagging, boosting, random forests, regression tree, and LASSO in the ultrahigh dimensional setting, using Scheetz et al. (2006)'s data set on gene expression in the mammalian eye and its relevance to eye disease, with 31099 genes as predictors with a sample of 120 rats. I concluded that both boosting and LASSO are competitive machine learning methods to be applied in high dimensional setting with satisfactory performance in variable importance measure. I am currently working on applying these five methods to other expression arrays data to validate the existing results and then submit the paper to an Applied Statistics journal for peer-review.

[3] **Independent Project**, Winter 2018: Under supervision of Dr. Giulio Tiozzo, I researched for the Siegel center problem, which is a linearization problem for germs in one complex dimension. Particularly, I investigated the case of analytic germs and proved Yoccoz's Lower Bound which gives an infimum of the radius of convergence for the power series of linearizing map. The proof uses the Brjuno condition and Davies

Lemma as well as other mathematical techniques including the Cauchy-Hadamard theorem, recursion, and series method.

[5] **Independent Study**, Fall 2016: Under supervision of Dr. Lisa Jeffrey, I studied about "The Fundamental Group and Covering Spaces". I investigated topics concerning the construction of fundamental group, Brouwer fixed-point theorem, properties of topological knots, and the covering spaces. I am looking at how algebraic topology could be applied in Statistics, particularly Topological Data Analysis (TDA).

[6] **Independent Study**, Fall 2016: Under supervision of Dr. Michael Evans, I studied about his new research on "Measuring Statistical Evidence Using Relative Belief Ratio". I investigated topics including but not limited to: objectivity and subjectivity of Statistics, Principle of Empirical Criticism, Dickey-Savage paradox, interpretation of probability, the issue of bias in statistical analyses illustrated via the Jeffrey-Lindleys paradox, and the inference theory on Relative Belief Ratio, which explicitly defines how we should measure statistical evidence.

[7] **Independent Project**, Summer 2015: As a Co-op student working at Security and Investigation Unit at the Bank of Nova Scotia, I studied the trends and patterns of fraudulent behaviors from the year of 2005 to 2014 related to Credit Cards, Western Union, and Interac e-transfer. I utilized summary statistics and time series including ARIMA models to evaluate the frequency and occurrences of the aforementioned electronic frauds and the associated seasonal factors. Due to confidentiality reason, specific results are undisclosed.

## CONSORTIUM & COLLABORATION

IMAXT Collaborator

2020-

- MerFISH (Multiplexed Error-Robust Fluorescence In-Situ Hybridization) provides spatial location within the tumor and the copy number (the number of individual RNA transcripts expressed in a tumor) of the detected RNA points with built-in error detection methods.
- We can then combine this information with the images of the cell nucleus to deduce which RNA transcript measurements are associated with each specific cell. But currently existing cell segmentation methods require us to manually input parameters into the cell segmentation pipeline. There is no automated unsupervised method.
- My role as a MERFISH collaborator focuses on developing unsupervised methods that segment cells accurately that would be essential for downstream analyses and reduce the time for upstream analyses by 80%. My pipeline aims to minimize false nuclei detection rates, accurately predict cell boundaries based on the nuclei and RNA transcript images, and minimize the incorrect detection of overlapping tumor cells.

FANTOM6 Collaborator

2019

- FANTOM (Functional ANnotation Of the Mammalian genome) is a worldwide collaborative project aiming at identifying all functional elements in mammalian genomes. The goal of the sixth edition of the FANTOM project (FANTOM6) is to systematically elucidate the function of lncRNAs in the human genome.
- As a collaborator, My research was particularly fundamental to the FANTOM6 project because the exploration of RNA secondary structures is a new, cutting-edge research subject.
- The identifications of patterns derived out of these structures enable us to further understand the functions of lncRNAs that serve key regulatory roles in modulating tumor suppressor.

**TEACHING  
EXPERIENCE**

Graduate Teaching Assistant 2020-  
**University of British Columbia, Vancouver, British Columbia, Canada**

- Plan, prepare for, and instruct tutorials for undergraduate/graduate courses: STAT300, STAT460/560
- Generate solutions for assignments and examinations using LaTeX
- Hold office hours to answer concerns relating to course materials and other academic concerns
- Grade assignments, quizzes, midterms and final examinations

Graduate Teaching Fellow 2018-2019  
**Yale University, New Haven, Connecticut, United States of America**

- Led a tutorial group of 25 students and acted as a consultant for their final projects that involved detailed write-up and coding. For example, I assisted a student in text analysis with Chinese characters using the statistical software R; this resulted in allowing him to proceed with his community-based research in China.
- Graded weekly assignments, weekly quizzes, midterms, and final exams
- Motivated and influenced students in learning and excelling themselves
- Hosted weekly office hours to answer students concerns on academic matters

Teaching Assistant 2016-2018  
**University of Toronto, Toronto, Ontario, Canada**

- Planned, prepared for, and taught multiple 1-hour or 2-hour tutorials for first and second year courses, each tutorial has 30-33 undergraduate students; the objective was to review course materials
- Voluntarily taught and delivered, in cross appointment with student association, over 40 review seminars during midterm and final exam seasons for over 10 first and second year mathematics and statistics courses from Fall 2014 to Winter 2017
- Invigilated 2-hour midterms and 3-hour final exams that seat over 600 students; proactively takes charge to become the Chief Invigilator by making announcements and delegating other invigilators to various duties
- Graded weekly assignments, weekly quizzes, midterms, and final exams
- Motivated and influenced students in learning and excelling themselves
- Hosted weekly office hours to answer students concerns on academic matters

Mathematics and Statistics Tutor 2017  
**University of Michigan, Ann Arbor, Michigan, United States of America**

- Conducted group tutoring and facilitated sessions to first and second year students for courses including Single Variable Calculus, Multivariable Calculus, Introductory Probability, and Introductory Statistics
- Utilized effective communication skills to assist students in discovering their weaknesses in the respective areas of study, then apply creative and interactive instructional methods to improve on their understanding of relevant concepts

- HONOURS AND AWARDS**
- EMBL-EBI Predoctoral Fellowship Grant 2021 May 2020
- 1000 GBP (approx. \$1750 CAD) per month living allowance
  - Conducts research under the supervision of Dr. Daniel Zerbino of the Genome Analysis team at EBI, Hinxton, Cambridgeshire, UK
  - Proposed research topic: to study the overlap between the single-cell eQTL data and the Ensembl Regulatory Build to determine whether a regulatory element can be assigned a bulk cis-regulatory interaction effect on a gene
- Four Year Doctoral Fellowship, University of British Columbia May 2020
- Competitive fellowship offered to Ph.D. students valued at \$24,300 CAD in addition to all tuition expenses
- RIKEN IMS Fellowship Grant, RIKEN March 2019
- Competitive fellowship grant offered by RIKEN Center for Integrative Medical Sciences, Japan
  - Cash award valued at \$4,780 USD for lodging and stipend of 90 days, in addition to a round-trip flight reimbursement
- Fourth Year Dean's List, University of Toronto Scarborough June 2018
- Annual award presented to students who have achieved a cumulative grade point average (CGPA) of 3.5 or better in their fourth year of study by the Dean of University of Toronto Scarborough
- UTSC Academic Travel Fund, University of Toronto Scarborough March 2018
- Cash award valued at \$1,500 CAD in support of conference presentation at Joint Mathematics Meeting 2018 held in San Diego, California, USA
  - Presented by the Office of Student Affairs at the University of Toronto Scarborough
- Departmental Travel Grant, University of Toronto Scarborough January 2018
- Cash award valued at \$250 CAD in support of conference presentation at Joint Mathematics Meeting 2018 held in San Diego, California, USA
  - Presented by Dr. Vassos Hadzilacos - Interim Chair of Department of Computer and Mathematical Sciences, UTSc
- International Exchange Award, University of Toronto September 2017
- Cash award valued at \$6,000 CAD to support my academic exchange in the United States
  - This award was merit and financial need based, granted upon admission into the University of Michigan.
- Killam Fellowship, Fulbright Canada March 2017
- Cash award valued at \$5,000 USD for academic exchange in the United States
  - Study abroad at University of Michigan for Fall 2017 semester
  - An additional \$750 USD Health Insurance Allowance

Departmental Travel Grant, University of Toronto Scarborough January 2017

- Cash award valued at \$250 USD to support conference presentation at Seminars for Undergraduate Mathematics in Montreal (SUMM) 2017.
- Presented by Dr. David Fleet - Chair of Department of Computer and Mathematical Sciences, UTSc

Third Year Dean's List, University of Toronto Scarborough October 2016

- Annual award presented to students who have achieved a cumulative grade point average (CGPA) of 3.5 or better in their third year of study by the Dean of University of Toronto Scarborough

## TEACHING

*Section* STAT 460/560: Graduate Statistical Inference I Fall 2020  
**University of British Columbia, Vancouver, British Columbia, Canada**

- Senior undergraduate students, qualifying course for Master's and PhD students in Statistics Department.
- Faculty member: Dr. Ruben Zamar
- Topics covered: Review of asymptotic theory and asymptotic inference, Multinomial distribution, Entropy and mutual information, Multivariate normal distribution, Least square estimation: Linear regression models, Maximum likelihood estimation (MLE), MLE for the parameters of the multivariate normal, Robust estimation of the parameters of the multivariate normal distribution, EM algorithm, Bayesian inference and MCMC

*Section* STAT 300: Intermediate Statistics and Applications Winter 2020  
**University of British Columbia, Vancouver, British Columbia, Canada**

- Two tutorials per semester with 36 students in each
- Faculty member: Dr. Lasantha Premarathna
- Topics covered: Further topics in statistical inference, including parametric and non-parametric methods, goodness-of-fit methods, analysis of variance and covariance, regression analysis, categorical data analysis, experimental designs, time series, model fitting, and statistical computing.

*Section* S&DS 100/500: Introductory Statistics Winter 2019  
**Yale University, New Haven, Connecticut, United States of America**

- One section with 25 students
- Faculty member: Dr. David Brinda
- Topics covered: An introduction to statistical reasoning and data analysis. Topics include the R programming language, histograms, scatterplots, summary statistics, basics of probability and random variables, simulation, iid sampling, the Central Limit phenomenon, estimators, hypothesis testing, confidence intervals, linear modeling. Focus on understanding concepts rather than mathematical manipulation.

*Section* S&DS 103: Introductory Statistics Fall 2018  
**Yale University, New Haven, Connecticut, United States of America**

- Hold three weekly office hours
- Faculty member: Professor Jonathan Reuning-Scherer

- Topics covered: Descriptive and inferential statistics applied to analysis of data from the social sciences. Statistical reasoning and methodology, descriptive statistics, populations, sampling, confidence intervals, tests of significance, combinatorics, probability, Central Limit Theorem, correlation, regression and experimental design.

*Tutorial* MAT B42: Multivariable Calculus II Winter 2017, Winter 2018  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- Two tutorials per semester with 30-33 students in each; Three tutorials for Winter 2018
- Faculty member: Professor Eric Moore
- Topics covered: Fourier series. Vector fields in  $\mathbb{R}^n$ , Divergence and curl, curves, parametric representation of curves, path and line integrals, surfaces, parametric representations of surfaces, surface integrals. Green's, Gauss', and Stokes' theorems will also be covered. An introduction to differential forms, total derivative.

*Tutorial* MAT A37: (Honours) Calculus II Winter 2016, Winter 2017  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- One tutorial per semester with 30-33 students in each
- Faculty member: Professor Kathleen Smith
- Topics covered: Integral Calculus of one variable and infinite series; strong emphasis on combining theory and applications; further developing of tools for mathematical analysis. Riemann Sum, definite integral, Fundamental Theorem of Calculus, techniques of integration, improper integrals, numerical integration, sequences and series, absolute and conditional convergence of series, convergence tests for series, Taylor polynomials and series, power series and applications.

*Tutorial* MAT B41: Multivariable Calculus I Fall 2016  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- Two tutorials per semester with 30-33 students in each
- Faculty member: Professor Eric Moore
- Topics covered: Partial derivatives, gradient, tangent plane, Jacobian matrix and chain rule, Taylor series; extremal problems, extremal problems with constraints and Lagrange multipliers, multiple integrals, spherical and cylindrical coordinates, law of transformation of variables.

*Tutorial* STA B22: Introduction to Statistics Winter 2016, Fall 2016, Winter 2018  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- Two tutorials per semester with 30-33 students in each
- Faculty member: Professor Mahinda Samarakoon, Professor Caren Hasler
- Topics covered: Statistical reasoning and methodology, descriptive statistics, populations, sampling, confidence intervals, tests of significance, correlation, regression and experimental design.

*Tutorial* STA B23: Introduction to Statistics for the Social Sciences Winter 2018  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- One tutorial per semester with 30-33 students in each
- Faculty member: Professor Javed Tomal
- Topics covered: Descriptive statistics, contingency tables, normal probability distribution, and sampling distributions. The second half of the course introduces

inferential statistical methods. These topics include significance test for a mean (t-test), significance test for a proportion, comparing two groups (e.g., comparing two proportions, comparing two means), associations between categorical variables (e.g., Chi-square test of independence), and simple linear regression.

*Tutorial* STA B57: (Honours) Introduction to Statistics Fall 2016  
**University of Toronto Scarborough, Toronto, Ontario, Canada**

- One tutorial per semester with 30-33 students in each
- Faculty member: Professor Javed Tomal
- Topics covered: A mathematical treatment of the theory of statistics. The statistical model, data collection, descriptive statistics, estimation, confidence intervals and P-values, likelihood inference methods, distribution-free methods, bootstrapping, Bayesian methods, relationship among variables, contingency tables, regression, ANOVA, logistic regression, applications.

**PROFESSIONAL AFFILIATIONS** GStat: American Statistical Association 2018-  
 Member: Royal Statistical Society 2017-  
 Associate Member: Statistical Society of Canada 2017-  
 Member: Canadian Mathematical Society 2014-2016

**STUDENT SUPERVISION** Kevin Yang, Undergraduate, UBC 2020-

- Kevin is assisting me with code optimization for my current doctoral research project: Bayesian Latent Marked Poisson Process Model. Kevin will read through the original research paper by Ghanta et al. (2018) and understand the pipeline that is posted on GitHub and then use various Python packages including but not limited to numba and numpy to optimize the code. The goal is to speed up the overall time that it takes to run the pipeline to approximately 0.7 seconds per MCMC iteration.

**UNIVERSITY SERVICES** Social Coordinator 2020-  
**Bioinformatics Graduate Program, UBC**

- Liaise with the Bioinformatics Faculty to communicate various issues regarding funding social events and program requirements
- Organize and host monthly meetups aimed at building a friendly learning environment among students in the Bioinformatics Graduate Program from both UBC and SFU

Assistant Vice President, Academics 2020-  
**Interdisciplinary Graduate Student Network, UBC**

- Work with members of the academic team to prepare for and organize academic events including hackathon and research conferences that aims to promote and connects graduate students from across various academic disciplines
- Assist the Finance Team in evaluating financial need-based grant applications during the period of COVID-19

Co-founder and Program Director 2019  
**Asian Graduate Network, Yale University**

- Organized, prepared, and set up this new student association that belongs to the Graduate Senate of Yale University with my colleague Dillon Tjijtamustika (MPH '20, Yale)

- The goal was to promote Asian cultural identities (South-East Asian, West Asian, and East Asian) and building stronger bonds among the Asian graduate students at Yale
- Planned and oversaw all the aspects of the social event, including: fundraising, logistics, and marketing
- Delegated our executives to execute the above tasks including: reaching out to other graduate societies, making purchases, and setting up on the day of the event
- Our notable outcome of 100 students in attendance for our events were recognized in the annual awards night hosted by the Yale Asian American Cultural Center, a culturally-oriented department at Yale University

Mathematics and Statistics Lecturer 2014-2017  
**Association of Mathematical And Computer Science Students, UTSC**

- Conducted and lectured multiple review seminars to assist students in reviewing the course materials.
- Midterm and Final Examination Review Seminars delivered (voluntary):
  - STA B22: Introduction to Statistics (Winter '16 and Winter'17)
  - STA B52: (Honours) Introduction to Probability (Fall'16)
  - STA B57: (Honours) Introduction to Statistics (Fall'16 and Winter'17)
  - MAT A23: Linear Algebra I (Winter '15 and Summer '15)
  - MAT A30: Calculus I for Physical Sciences (Winter '15)
  - MAT A31: (Honours) Calculus I for Mathematical Sciences (Fall '14 and Winter '15)
  - MAT A32: Calculus I for Management (Fall '15, Winter '16 and Fall'16)
  - MAT A33: Calculus II for Management (Winter '16)
  - MAT A37: (Honours) Calculus II for Mathematical Sciences (Winter '15, Summer '15, Winter '16 and Summer '16)

Acting President 2016  
 President 2015-2016  
 Vice President, Academics 2014-2015  
**Association of Mathematical And Computer Science Students, UTSC**

- Managed 25 executives and oversaw the operations of the student association
- Restructured the organization by removing the 1-to-8 hierarchy structure, aka. 1 President and 8 Vice Presidents; instead, I created new positions such as Directors and Associates, up to 4 levels to increase the efficiency and communication between my staff
- Introduced free review seminar series for examinations that I started as a Vice President, recruited 15 ambitious TAs on semester basis to assist with teaching these review seminars; created a feedback system to conduct quality assurance
- introduced networking events, regular office hours, mathematics cafe, and gaming night to create a more close-knit atmosphere within the department
- Setup new guidelines and operating procedures, increased marketing and outreach; this resulted in greater publicity as well as an overall increase of 250% in attendance compared to the previous year
- Received the group honor of "Academic Engagement" awards presented by the Scarborough Campus Student Union

**COMMITTEE** Committee Member 2020-  
**MEMBERSHIPS** **Yale Club of British Columbia, Yale University**

- Communicate with current students, alumni and faculty members residing in Vancouver who are affiliated with Yale University
- Assist the President in organizing social events to gather members of the Yale community in the Greater Vancouver Area
- Promote Yale University by presenting at high schools and admission events, catered to those who are seeking admissions to the undergraduate, graduate, and professional programs for the Fall 2021 admission cycle

Committee Member 2020-  
**Yale Alumni Schools Committee, Yale University**

- Assist the Office of Undergraduate Admissions with processing local applications and interviewing college applicants from the Vancouver area