Jeff Cromwell, PhD

Today's Curriculum Vitae and Technical Resume

July 2 2021

Mathematical Learning Space Research Portfolio

Research Scholar and Mathematical Programmer

July

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Figure 1: Posting Schedule for The Mathematical Learning Space Research Portfolio July 2021. Green are days of Posting and Blue are Reviewing days for each week

1 Bio

Jeff Cromwell has held diverse teaching, research and consulting positions at Natural Research Analysis Center, Regional Research Institute, Arizona State University, University of Pittsburgh, West Virginia University, California University of PA, Edinboro University of PA, University of Michigan Summer School, and the University of Phoenix. He has also been a software consultant and developer for numerous companies with C based and R computer languages in the financial industry. He received his PhD in Natural Research Economics from West Virginia University with the award of distinction in Econometrics as well as honors with Scholarships, Presidential Scholar and Wall Street Journal Award with his three academic degrees, dissertation and thesis. He has published books in Time Series Analysis, articles in computer magazines such as Dr. Dobbs Journal with published articles featured in associate faculty compendiums. Overall, he has contributed work both published and unpublished of over 200 scientific articles and seven books in the field of mathematical oncology, bioinformatics, and financial econometrics listed here with additional detail in The Mathematical Learning Space Research Portfolio.

2 Contact Information

Table 1 has the Current Contact Information

Year	Contact	Information
2021	City Residence	Bridgeville, PA 15017
2021	Phone	send email
2021	Email for Inquires	designofharmony@gmail.com
2021	Social Networking on Instagram	mathmusicbiology
2021	Scientific Communication	mathlearningspace.weebly.com
2021	Professional Networking	https://www.linkedin.com/in/jeff-cromwellphd

Table 1: Selected Contact Information for Scientific Communication, Inquires about Research Work and Consulting Opportunities

3 Summary Of Education and Experience

Current daily research work in Gastrointestinal cancer with over 200 articles, preprints and six books in the fields of time series analysis, mathematical biology, mathematical oncology, R programming, number theory and music. Several of these works are in review and waiting for publication. The week of June 11, 2021 the following preprints and journals have been submitted:

1. Preprint 132 Submitted to Advances in Applied Mathematics
2. Preprint 131 Submitted to Computational Biology and Chemistry
3. Preprint 133 Submitted to Mathematical Biosciences
4. Preprint 128 Submitted to Applied Mathematics Letters
5. Preprint 129 Submitted to Applied Mathematics Letters
6. Preprint 130 Submitted to Computational Statistics and Data Analysis
7. Preprint 120 Submitted to Computers and Mathematics with Applications
8. Preprint 121 Submitted to Computational Statistics and Data Analysis
9. Preprint 122 Submitted to Mathematics and Computers in Simulation
10. Preprint 123 Submitted to Computers and Mathematics with Applications
11. Preprint 126 Submitted to Mathematics and Computers in Simulation
12. Preprint 127 Submitted to Mathematics and Computers in Simulation
13. Preprint 135 Submitted to Bulletin of Mathematical Biology
14. Preprint 124 Submitted to Cancer Letters
15. Preprint 125 Submitted to Applied Mathematics and Computation

For the week of June 20, 2021 the following preprints and journals have been submitted.

1. Preprint 110 Submitted to Cancer Letters
2. Preprint 111 Submitted to NSF Grant Fast Track
3. Preprint 112 Submitted to Applied Mathematics Letters
4. Preprint 113 Submitted to Cancer Informatics
5. Preprint 114 Submitted to Applied Mathematics Letters
6. Prepring 115 Submitted to Journal of Mathematical Biology

7. Preprint 116 Submitted to Journal of Biomedical Informatics
8. Preprint 117 Submitted to Cancer Informatics
9. Preprint 118 Submitted to Statistics and Probability Letters
10. Preprint 119 Submitted to Computers in Biology and Medicine

For the week of June 27, the following book proposals, preprints and journals have been submitted.

1. Preprint 30 Submitted to MDPI Plants
2. Preprint 31 Submitted to MDPI Biology:Plant Science
3. Preprint 32 Submitted to Plant Physiology
4. Preprint 33 Submitted to Preprint Archive
5. Preprint 34 Submitted to Preprint Archive
6. Preprint 35 Submitted to Preprint Archive
7. Preprint 36 Submitted to Preprint Archive
8. Preprint 37 Submitted to Preprint Archive
9. Preprint 38 Submitted to Preprint Archive
10. Submitted Book Proposal Completed book on Financial Econometrics in the R Language for Pharamceuticals: A Notebook of Articles for the Classroom Volume 1
11. Comparison Of Beta-Skew-t-EGARCH models for Short Run Optimal Pharmaceutical Portfolio Performance-Special Issue on Time Series Analysis Computational Statistics Journal
12. The Moment Structure and Hypothesis Testing of Convex Scale Designs for Bivariate Mixture Distributions-Special Issue on Time Series Analysis Computational Statistics Journal

The mathematical learning space research portfolio is a place designed for potential teaching and research opportunities at the university. My experience includes research, software development and/or teaching appointments at the *Arizona State University, Regional Research Institute at WVU, West Virginia University, Edinboro University of PA, California University of PA, University of Michigan and the University of Pittsburgh, Mathematical and database programming has been performed at Arizona State University and the University of Pittsburgh*. In addition to these appointments, I have contributed to the reviews of journal articles at various journals and books such as Modeling and Forecasting Primary Commodity Prices with Dr. Walt C. Labys and have submitted mathematical biology software engineering grants for the NIH SBIR program as well as the West Virginia Environmental Protection Agency both with colleagues such as Dr. Jerry J. Fletcher at the Natural Resource Analysis Center and independently.

I mostly speak English, Chinese, and Japanese along with some Hebrew and use my languages for personal growth, networking, relationship building, dating, travel for conference participation and tourism and scientific communication. My programming language selection for journal articles and books is mainly R with C and have over 30 years experience with .NET languages and SQL Server for many different software engineering departments within companies with classes taught at the university in Java. My lastest books have both R and C applied to the field of mathematical oncology and financial econometrics as well as music that I use for scientific communication and teaching R. The latter has many examples of musical compositions with a soon to be released first album with the piano composition and performances blended with the design of artificial music in the classical and jazz music genres.

As a writer and programmer, I compose journal articles almost daily in both a software design pattern, online data sources in both art and science with programs that generate tables and figures. I seek a position that provides compensation for this task as it is a part of my daily healthy lifestyle regardless of my academic appointment. My PhD expertise is in the domain of time series econometrics applied with mathematical software engineering principles in the context of natural resource economics. If you have any questions, please contact me with the information provided and my preference is email first or the form on the Mathematical Learning Space Research Portfolio web site. If you have any questions please send me an email.

4 Awards and Scholarships

1. Full tuition research assistantship, Regional Research Institute 1986
2. Qualifying PhD Exam in Econometrics-Pass with Distinction
3. Research Quality Award - Edinboro University of PA 1990 研究品質賞 Kenkyū hinshitsu-shō
4. Wall Street Journal Achievement Award 1985
5. Burns Scholarship for Outstanding Achievement in Social Sciences 1985 社会科学の卓越した業績のための奨学金 Shakai kagaku no takuetsu shita gyōseki no tame no shōgakkin
6. Presidential Scholar 1985,1986 大統領学者 Daitōryō gakusha

5 Math Learning Space Research Portfolio

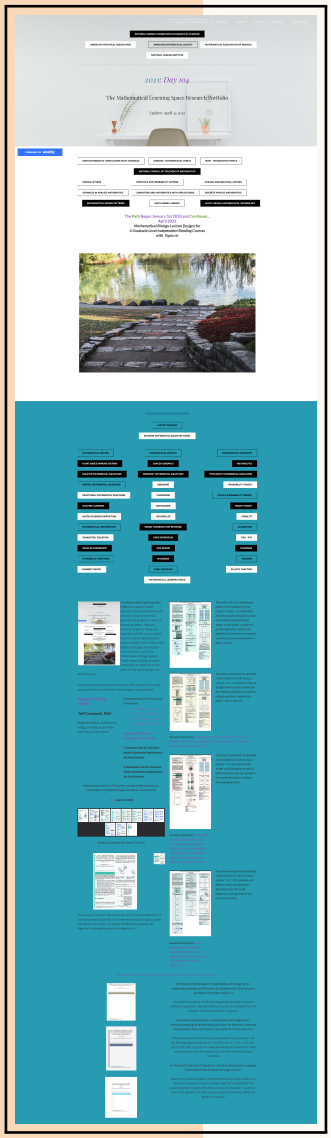

Figure 2: Math Learning Space Research Portfolio Partition of Main Page for 4172021 at http://mathlearningspace.weebly.com/

6 Education

1. 2004 Ph.D. Natural Resource Economics- Emphasis: Nonlinear Time Series Analysis, Mineral Economics, Mathematical Economics and Chaos TheoryWest Virginia University
2. 1998 M.S. Agricultural Economics- Emphasis: Mathematical Statistics and Multinomial Models West Virginia University
3. 1986 B.A. Economics- Emphasis: Mathematics and Philosophy of Science California University of PA

7 Published and In Review Books

1. Cromwell, JB, WC Labys and M. Terraza Univariate Tests for Time Series Models (Quantitative Applications in the Social Sciences)
2. Cromwell, JB, MJ Hannan, WC Labys and M. Terraza Multivariate Tests for Time Series Models (Quantitative Applications in the Social Sciences)
3. Cromwell JB (In Review) Collected Papers in Mathematical Oncology Series : Mathematical Models and Theorems for Epithelial Cell Cycle Dynamics and Repair First Edition Volume 1
4. Cromwell JB (In Review) Collected Papers in Mathematical Oncology Series : Ethnopharmacological Mathematical Structures for Botanical Treatment of Helicobacter Pylori with Gastric Carcinoma First Edition Volume 2
5. Cromwell JB (In Review) A Collection of Algorithms in the R Statistical and C Language in the Field of Mathematical Oncology Volume 1
6. Cromwell JB (In Review) Music and Mathematics: A Collection of Essays from A Number Theory Notebook Vol 1
7. Cromwell JB (In Review) Financial Econometrics in the R Language for Pharamceuticals: A Notebook of Articles for the Classroom Volume 1

8 Latest Preprints January to June 2021

In the Process of Collaboration and Academic Review for Journal Publication or Preprint Archive

1. Preprint 1: Cromwell JB Stability Theorems for State Changes in Expression Levels with Protein Stress for HSPA4, HSP90AA1 and HSP90AB1 in STIP1, CCT8, and CCT5 Protein to Protein Interaction in Mathematical Oncology Applications to be submitted to AIMS Mathematical Journal
2. Preprint 2: Cromwell JB Stability Theorems for CDX2 Models of Coexpression in the VDR, BMP4, LEP, ASCL2, EOMES Network to be submitted to AIMS Mathematical Biosciences and Engineering Journal
3. Preprint 3: Cromwell JB A Mathematical Oncological Model of Overexpression Levels of TERT with interaction of PIF1, DKC1, NOP10, PINX1, MYC for telomerase activity to be submitted to AIMS Mathematics in Engineering
4. Preprint 4: Cromwell JB Mutations in TP53 with interaction in the BAX, BID, PRDX1, CASP8, BCL212 Network for Stability Co-expression Analysis to be submitted to AIMS Medical Science
5. Preprint 5: Cromwell JB The MUC1 ,CCDCL15, EGFR, ATP6VOA2, FHL2, CDH1 Network Model with Co-expression Binding to be submitted to AIMS Molecular Science

6. Preprint 6: Cromwell JB A Mathematical Oncology Model for Expression Level Changes with Methylation of MLH1 in the PMS2, PMS1 , MSH3, EXO1, BLM Coexpression Network to be submitted to AIMS Molecular Science
7. Preprint 7: Cromwell JB A Delayed Differential Equation Model with Stability Expression Levels in TP53 Mutations with CREBBP , HIST1H3A , FOXO3 , RXRA, RXRB Network in Mathematical Oncology to be submitted to AIMS Molecular Science
8. Preprint 8: Cromwell JB A Mathematical Model of Stability Changes in Expression Levels for TM9SF2, RPN2, SLC25A3, HSP90B1 , DDOST, ATP5A1 Network in Mathematical Oncology to be submitted to AIMS Molecular Science
9. Preprint 9: Cromwell JB Stability Changes in Expression Levels with GBR2 , EGFR, CBL , PIK3R2, SHC1 , SOS1 in Mathematical Oncology, to be submitted to AIMS Molecular Science
10. Preprint 10: Cromwell JB Cell Surface Ligand Binding and Autophosphorylation with MET Amplification in the INPPL, INSRR, PTPN1, INSR, EGFR network in Mathematical Oncology Models to be submitted to AIMS Molecular Science
11. Preprint 11: Cromwell JB Spectral Radius Distributional Convergence and Moment Classfication of Chemical Graphs For Cancer Research to be submitted Cancer Science.
12. Preprint 12: Cromwell JB A Mathematical Model of Bond Angle Distributions of Binding Site Potential for DNA To Protein Interaction Networks to be submited to Cancer Science.
13. Preprint 13: Cromwell JB A Mathematical Letter on Contour Mapping for Virus Protein Modal Dynamics not submitted.
14. Preprint 14: Cromwell JB Displacements Along Modal Trajectories for the AP2B1 Protein Coexpression Network for Vesicular Transport In the Internal Absorption of Viral Behavior not submitted.
15. Preprint 15: Cromwell JB A Modal Analysis of Secondary Properties and Subsequence Classification of Coexpression Networks of an Apolipoprrotein for Retinol Binding not submitted.
16. Preprint 16: Cromwell JB A Brief Mathematical Note on Retinoid Metabolism Networks with Beta-apo-carotenoids and CRBP, CRABP, FABP5 Cellular Retinoid Binding-proteins not submitted.
17. Preprint 17: Cromwell JB A Brief Mathematical Note on mRNA Cancer and Virus Vaccines not submitted.
18. Preprint 18: Cromwell JB A Brief Mathematical Biology Note Dipeptide Matrics from Maximum Likelihood Markovian Chains for Retinoid Binding-Proteins not submitted.
19. Preprint 19: Cromwell JB (DRAFT) A Mathematical Letter on Constitutional QSAR Properties for Subsets of Compound Class A for Statistical Learning not submitted.
20. Preprint 20: Cromwell JB (DRAFT) A Mathematical Biology Letter on Statistical Learning Change Point Algorithms with the Multilinear Tensor Decomposition Method for Chromosomal Molecular Models 染色体分子モデルのマルチ線形テンソル分解法を用いた統計的学習変化点アルゴリズムに関する数理生物学レターのドラフト Senshokutai bunshi moderu no maruchi senkei tensoru bunkai-hō o mochiita tōkei-teki gakushū henka-ten arugorizumu ni kansuru sūri ikimonogaku retā no dorafuto not submitted.
21. Preprint 21: Cromwell JB (DRAFT)Variations on the Generalized Beta Distribution for Protein Coexpression Networks in Mathematical Oncology 数学的腫瘍学におけるタンパク質共発現ネットワークの一般化ベータ分布の変動 Sūgaku-teki shuyō-gaku ni okeru tanpakushitsu-domo hatsugen nettowāku no ippan-ka bēta bunpu no hendō submitted.
22. Preprint 22 : Cromwell JB (DRAFT) Transformations of a new Mathematical Constant for Piano Frequency Design an Classical Minuet Compositional Patterns ピアノ周波数設計のための新しい数学定数の変換古典的なメヌエットの構成パターン Piano shūhasū sekkei no tame no atarashī sūgakuteisū no henkan koten-tekina menuetto no kōsei patān submitted Notes on Number Theory and Discrete Mathematics
23. Preprint 23: Cromwell JB (DRAFT) A New Mathematical Constant and the Fibonacci Sequence: Properties and Directions 新しい数学定数とフィボナッチ数列：特性と方向 Atarashī sūgakuteisū to fibonatchi sūretsu: Tokusei to hōkō submitted Notes on Number Theory and Discrete Mathematics
24. Preprint 24: Cromwell JB (DRAFT) A New Mathematical Constant and Cubic Splines for Nonlinear Difference Polynomials 非線形差分多項式のための新しい数学定数と3次スプライン Hisenkei sabun takōshiki no tame no atarashī sūgakuteisū to 3-ji supurain submitted.
25. Preprint 25: Cromwell JB (DRAFT) A New Mathematical Constant with Continued Fraction Representation and Theorems 連分数表現と定理を備えた新しい数学定数 Renbunsū hyōgen to teiri o sonaeta atarashī sūgakuteisū submitted Notes on Number Theory and Discrete Mathematics
26. Preprint 26: Cromwell JB (DRAFT) Discriminant Polynomials and Differential Operators for Sylvester Matrix Based Classification of Protein Co-Expression in Oryza sativa Oryza sativa におけるタンパク質共発現のシルベスター行列ベースの分類のための判別多項式と微分演算子 Oryzasativa ni okeru tanpakushitsu-domo hatsugen no shirubesutā gyōretsu bēsu no bunrui no tame no hanbetsu takōshiki to bibun enzanshi submitted
27. Preprint 26: Cromwell JB (DRAFT) Continued Fraction Representations of Variations on the Fransén–Robinson constant and Euler Number for Functional Differential Ratio Design 関数微分比設計のためのフランセン ロビンソン定数とオイラー数の変動の連分数表現 Kansū bibun-hi sekkei no tame no furansen Robinson teisū to oirā-sū no hendō no renbunsū hyōgen not submitted.
28. Preprint 27: Cromwell JB (DRAFT) Geometric Path Analysis of Premiums in Monte Carlo Option Pricing Models of Polynomial Drift with Generalized Laguerre Polynomials 一般化されたラゲール多項式を使用した多項式ドリフトのモンテカルロオプション価格設定モデルにおけるプレミアムの幾何学的経路分析 Ippan-ka sa reta ragēru takōshiki o shiyō shita takōshiki dorifuto no montekaruroopushon kakaku settei moderu ni okeru puremiamu no ikunangaku-teki keiro bunseki not submitted.
29. Preprint 28: Cromwell JB (DRAFT)Floor and Ceiling Functions in Continued Fraction Representations for Mathematical Constants 数学定数の連分数表現における床関

数と天井関数 sūgakuteisū no renbunsū hyōgen ni okeru yukakansū to tenjōkansū not submitted.

30. Preprint 28A: Cromwell JB (DRAFT) Gamma Functions and Transcendental Numbers for Mathematical Constant Classification 数学的定数分類のためのガンマ関数と超越数 sūgaku-teki teisū bunrui no tame no ganma kansū to chōetsu-sū not submitted.
31. Preprint 29: Cromwell JB (DRAFT) A Modified Fractional Derivative Operator Based on the Beta Function for Differential Equation Systems in Mathematical Biology 数理生物学における微分方程式システムのベータ関数に基づく修正分数階微分演算子 sūri ikimonogaku ni okeru bibun hōteishiki shisutemu no bēta kansū ni motodzuku shūsei-bun sū-kai bibun enzanshi not submitted.
32. Preprint 30: Cromwell JB (DRAFT)Transcription factor Regulation of Phosphorylated Ligands in Oryza sativa Oryzasativaのリン酸化リガンドの転写因子調節 Oryzasativa no rin sanka rigando no tensha inshi chōsetsu not submitted.
33. Preprint 31: Cromwell JB (DRAFT)Abscisic Acid-Regulated Gene Expression In Seed Development of Oryza sativa Oryzasativaの種子発育におけるアブシジン酸調節遺伝子発現 Oryzasativa no shushi hatsuiku ni okeru abushijin san chōsetsu idenshi hatsugen not submitted.
34. Preprint 32: Cromwell JB (DRAFT) Embryonic Abundant Protein Co-Expression in Hydrophilic Plants like Oryza Sativa Oryzasativaのような親水性植物における胚の豊富なタンパク質の共発現 OryzaSativa no yōna shinsuisei shokubutsu ni okeru hai no hōfuna tanpakushitsu no kyō hatsugen not submitted.
35. Preprint 33: Cromwell JB (DRAFT)Regulation of the Sulfation of Molybdenum in Protein Co-Expression of Oryza sativa Oryzasativaのタンパク質共発現におけるモリブデンの硫酸化の調節 Oryzasativa no tanpakushitsu-domo hatsugen ni okeru moribuden no ryūsan-ka no chōsetsu not submitted.
36. Preprint 34: Cromwell JB (DRAFT) Transcriptional Factors Repressors of Early Auxin Response at Low Auxin Concentrations in Co-Expression Networks of Oryza sativa Oryzasativaの共発現ネットワークにおける低オーキシン濃度での初期オーキシン応答の転写因子リプレッサー Oryzasativa no kyō hatsugen nettowāku ni okeru tei ōkishin nōdo de no shoki ōkishin ōtō no tensha inshi ripuressā not submitted.
37. Preprint 35: Cromwell JB (DRAFT) Protein Co-Expression and AM Formation Regulation in Oryza sativa Oryzasativaにおけるタンパク質の共発現とAM形成の調節 Oryzasativa ni okeru tanpakushitsu no kyō hatsugen to AM keisei no chōsetsu not submitted.
38. Preprint 36: Cromwell JB (DRAFT)Complex Formation with Phosphorylated Ligands by Interfering with Kinases and their Effectors in Protein Co-Expression Networks in Oryza sativa Oryzasativaのタンパク質共発現ネットワークにおけるキナーゼとそのエフェクターに干渉することによるリン酸化リガンドとの複合体形成 Oryzasativa no tanpakushitsu-domo hatsugen nettowāku ni okeru kināze to sono efekutā ni kanshō suru koto ni yoru rin sanka rigando to no fukugō-tai keisei not submitted.
39. Preprint 37: Cromwell JB (DRAFT)Germination Inhibition Under Stress with Protein Co-Expression Interaction in Oryza sativa Oryzasativaにおけるタンパク質共発現相互作用によるストレス下での発芽阻害 Oryzasativa ni okeru tanpakushitsu-domo hatsugen sōgo sayō ni yoru sutoresu-ka de no hatsuga sogai not submitted.
40. Preprint 38: Cromwell JB (DRAFT)Controlling Axillary Meristem Initiation in Co-Expression Networks of Oryza sativa Oryzasativaの共発現ネットワークにおける腋窩メリステム開始の制御 Oryzasativa no kyō hatsugen nettowāku ni okeru ekika merisutemu kaishi no seigyo not submitted.
41. Preprint 39: Cromwell JB (DRAFT) Geometric Path Analysis of Graph Structures in Premiums from Monte Carlo Option Pricing Models of Polynomial Drift with Generalized Laguerre Polynomials 般化されたラゲール多項式を使用した多項式ドリフトのモンテカルロオプション価格設定モデルからのプレミアムのグラフ構造の幾何学的経路分析 ippan-ka sa reta ragēru takōshiki o shiyō shita takōshiki dorifuto no montekaruroopushon kakaku settei moderu kara no puremiamu no gurafu kōzō no ikunangaku-teki keiro bunseki not submitted.
42. Preprint 40: Cromwell JB (DRAFT) Modular J Functions and Ratios of Fibonacci Polynomials as Basis Polynomials for Hypergeometric Functions in the Complex Domain 複素領域の超幾何関数の基底多項式としてのモジュラーJ関数とフィボナッチ多項式の比率 fukuso ryōiki no chōkikakansū no kitei takōshiki to shite no mojurā J kansū to fibonatchi takōshiki no hiritsu not submitted.
43. Preprint 41: Cromwell JB Phosphorylation Activity in Signal Transduction toRegulate Growth in Azuki Bean Development 小豆の発育における成長を調節するためのシグナル伝達におけるリン酸化活性 Azuki no hatsuiku ni okeru seichō o chōsetsu suru tame no shigunaru dentatsu ni okeru rin sanka kassei not submitted.
44. Preprint 42: Cromwell JB Scale Designand the Generalized Beta Distribution for the Coexpression of Protein Interaction for a Bowman-Birk typeproteinase inhibitor with KTI3, PM34, and MP2 k型プロテイナーゼ阻害剤とKTI3、PM34、およびMP2とのProtein Interactionの共発現のスケール設計と一般化ベータ分布 Bowman - Birk-gata puroteināze sogai-zai to KTI 3, PM 34, oyobi MP 2 to no ProteinInteraction no kyō hatsugen no sukēru sekkei to ippan-ka bēta bunpu not submitted.
45. Preprint 44: Cromwell JBMolecular Properties of Spiral Chains in the Community Organization and Network Structure of CYP1A2 not submitted.
46. Preprint 45: Cromwell JBDistributional Design and Classification of Motif Frequencies in a Contemporary Classical Jazz Album Assembly for Performance Improvisation not submitted.
47. Preprint 46: Cromwell JB Chemical Ratios of CYP1A2 Subsequences and Anti-apoptotic Genes of Compound Resistance Expression with Irinotecan not submitted.
48. Preprint 47: Cromwell JB Trentonin Numerical and Structural Similarities for Expression Modification in Retinol Metabolism not submitted.
49. Preprint 48: Cromwell JBHydrogen and Type Two Distributional Classifications for Gene Expression Modification in Carcinoma Cell Lines not submitted.
50. Preprint 49: Cromwell JB The Positive Relationship Between Polar Surface Area Efficiency and Hydrogen Bond Acceptors in Bounded Hydrogen Carbon Cancer Treatment Compounds not submitted.

51. Preprint 49A: Cromwell JB Molecular Descriptor Combinatorial Design for Ratio Relationship Categorization Based on Chemical Structure in Cancer Treatment not submitted.
52. Preprint 50: Cromwell JB Molecular Complexity, Path Length and Carbon Classification in Chemical Carcinogenesis Treatment not submitted.
53. Preprint 51: Cromwell JB Folate Synthesis and The Cytochrome P450 System with Methotrexate and Lapatnib not submitted.
54. Preprint 51A: Cromwell JB Cytochrome P450 Leucine Binding with Sestrin 2 and mTOR Activation for Protein Biosynthesis Regulation not submitted.
55. Preprint 52: Cromwell JB Distribution Classification of Fluctuations and Peptide Subsequences Properties for Protoporphyrin Ferrochelatase not submitted.
56. Preprint 53:Cromwell JB A Compendium of 7 Days in Cancer Genomics with Application to the R, C and TeX Computer Languages for Scientific Writing not submitted.
57. Preprint 54: Cromwell JB Sampling Similarities of Heme Molecular Complexity for Functional Classification and Compound Discovery not submitted.
58. Preprint 55: Cromwell JB Ratio Design for Modulation of Deregulation and Overexpression with Decreased ERK Signaling not submitted.
59. Preprint 56: Cromwell JB Parasitic Interactions, Antimicrobial Actions, and Bacteriostatic Antibiotics with Cytochrome P450 Inhibitors not submitted.
60. Preprint 57: Cromwell JB Reduced Rank Vector Generalized Linear Model and Vector Cubic Spline Estimation of Rule Set Based Molecular Descriptor Collections for Bacteriostatic Antibiotic Design not submitted.
61. Preprint 58: Cromwell JB Bacterial Cellular Metabolism Chemical Complexity Moment Models in the Binding of Aminoacyl-tRNA to the mRNA-Ribosome Complex not submitted.
62. Preprint 58A: Cromwell JB Optimal Portfolio Performance of Bacteriostatic Pharma Stock Price Dynamics with Biomedical and Mathematical Rule Designs not submitted.
63. Preprint 59: Cromwell JB Comparison of Econometric Models for Short Run Optimal Pharmaceutical Portfolio Performance not submitted.
64. Preprint 60: Cromwell JB The Moment Structure and Hypothesis Testing of Convex Scale Designs for Bivariate Mixture Distributions not submitted.
65. Preprint 61: Cromwell JB Co-Moment Diversification Potential with Mixture Distributions for Pharmaceutical Portfolio Optimization Based Risk Classifications not submitted.
66. Preprint 62: Cromwell JB Lexical Diversity Complexity of Information and Readability Measure Modification for Machine Learning and Decision Making not submitted.
67. Preprint 63: Cromwell JB Distributional Readability Index Designs for Category Mapping of Biomedical Information Sets not submitted.
68. Preprint 63A: Cromwell JB Maximum Likelihood Estimation of Heterogeneous Gastrointestinal Cancers Data Filters with Dirchlet and Mixture Distributions for Topical Model Designs not submitted.
69. Preprint 64: Cromwell JB Chemical Functional Group Classification of Helicobacter Pylori Protein Expression Interaction with Tanimoto Structural Filters for Gastrointestinal Cancers not submitted.
70. Preprint 64A: Cromwell JB Molecular Filtering Based on Anatomical Gastrointestinal Cancer Treatment Protocol Vocabulary an N Gram Structural Similarity Descriptions not submitted.
71. Preprint 65: Cromwell JB Pattern Recognition in Reaction Classes of Substrate Product Pairs and Functional Groups not submitted.
72. Preprint 65A: Cromwell JB Structural Similarity Complexity and Post Translational Proteins with Medicinal Herbal Oils not submitted.
73. Preprint 66: Cromwell JB Molecular Formula Ratios, Scale Estimation, and Distributional Hypothesis Testing for Medicinal Plant Extracts not submitted.
74. Preprint 67: Cromwell JB Metric Design for Chemical Fingerprint Grouping with Medicinal Plants for Feature Based Correlations not submitted.
75. Preprint 68: Cromwell JB Contextual Relevance and Polynomial Approximations of Integer Combinatorics in Molecular Design, Similarities, Filtering and Classification for Medicinal Plants. not submitted.
76. Preprint 69: Cromwell JB NADP+ Products Peptidoglycan Biosynthesis and Gastric Acid Secretion with Gram Negative Bacterial Cell Wall Biosynthesis Inhibitors not submitted.
77. Preprint 70: Cromwell JB Cellular Fitness, Longevity and B Cell Receptor SubGraph Properties and Metrics not submitted.
78. Preprint 71: Cromwell JB Longevity Regulation, B cell Receptor Signaling and Intestinal Immune Network for IgA Production with RELA Maximum Likelihood Estimation of Transition Matrices for RELA Nucleotides not submitted.
79. Preprint 72: Cromwell JB CDX2-Overexpression to Transcriptional Activation and Repression not submitted.
80. Preprint 73: Cromwell JB Classification Variations in Translated Nucleotide Sequences Transition Probabilities for Glycosaminoglycan Binding Proteins in Mitogen-Activated Protein Kinase Cascades not submitted.
81. Preprint 74: Cromwell JB Activated Oncogenes and Positive and Negative Feedback Circles in p53 Signalling not submitted.
82. Preprint 75: Control of Asymmetric Cell Division and Beta-catenin Gene Activation in the Wnt Signalling System not submitted.
83. Preprint 76: Cromwell JB Mutation-inactivated TGFBR2 Mutation-inactivated SMAD2 Cellular Functions of Proliferation, Apoptosis, Differentiation and Migration Regulated by TGF-beta not submitted.
84. Preprint 77: Cromwell JB Adherens Junction Network FYN Community Membership Structure and Fluctuations with Structural Variational Properties not submitted.
85. Preprint 78: Cromwell JB Moran I Coefficient Fluctuation Analysis for FYN Variations in Adherens Junction not submitted.
86. Preprint 79: Cromwell JB Molecular Properties of Histone Deacetylase Inhibitors in the Phosphatidylinositol Signaling System and Inositol Phosphate Metabolism not submitted.

87. Preprint 80: Cromwell JB LP Spaces and Proto Oncogene Potential Energy Distribution based on Fluctuation Decomposition in Phosphatidylinositol Signaling System not submitted.
88. Preprint 81: Cromwell JB Algorithms of Treatment Protocols and Clinical Trial Data for Gastric Carcinoma not submitted.
89. Preprint 82: Cromwell JB N0 to N3b Regional Lymph Node Metastasis Progression and Curvature in Gastric Carcinoma not submitted.
90. Preprint 83: Cromwell JB FOS Co-Expression and Lymphocyctes of B and T cells in Lymph Nodal Count Stage Identification in Gastric Carcinoma not submitted.
91. Preprint 84: Cromwell JB Oxalidaceace and Talarozole Inhibitor of Seven Cytochrome P450 Isoforms Retinoic Acid Hydroxylase Vitamin D Degradation not submitted.
92. Preprint 85: Boundary Sensitivity in G Protein-Coupled Receptors, GTPase-activating Proteins and Cyclin-dependent Kinases in Signal Transduction Systems of Gastric Carcinomas not submitted.
93. PREPRINT 86: Cromwell JB DISTRIBUTIONAL PATH SEGMENT STRUCTURAL SIMILARITY IN MUTATION ACTIVATED AND OVEREXPRESSION NETWORKS not submitted.
94. PREPRINT 87: Cromwell JB EIGENVALUE PROPERTIES IN SPATIAL CORRELATION FOR KERNEL BASIS OPTIMIZATION FOR G PROTEIN CLASSIFICATION not submitted.
95. PREPRINT 88: Cromwell JB SPATIAL ELEMENTAL EIGENVALUES AND DIVERSITY PERIODICITY OF TORSION ANGLES IN SIGNALLING PROTEINS not submitted.
96. PREPRINT 89: Cromwell JB THE RADIUS OF GYRATION VARIATIONS FOR SHORT STRUCTURAL MOTIFS OF TRYPTOPHAN-ASPARTIC ACID AND DOUBLE-MEMBRANED AUTOPHAGOSOMES not submitted.
97. PREPRINT 90: Cromwell JB MOLECULAR PROPERTY GRAPHS OF PAIRWISE ASSOCIATION MEASURE DIVERSITY AND BINARY MULTI-CATEGORY IDENTIFICATION WITH CRYSTAL STRUCTURAL SAMPLING OF WD40 REPEAT DOMAINS not submitted.
98. PREPRINT 91: Cromwell JB STRUCTURAL MOTIF CLUSTERS BASED ON THE MOLECULAR PROPERTIES OF RETINOIC ACID RECEPTORS AND ALL TRANS RETINAL BOUND CRYSTALS not submitted.
99. PREPRINT 92: Cromwell JB CONTOURS FROM BAYESIAN SPATIAL REGRESSION MODELS FOR CRYSTAL STRUCTURES OF VITAMINS WITH SCALE DIVERSITY COVARIATES not submitted.
100. PREPRINT 93: Cromwell JB A MULTIVARIATE GENERALIZED LINEAR SPATIAL REGRESSION MODEL OF VITAMIN CRYSTAL STRUCTURES AND CHEMICAL SCALES not submitted.
101. PREPRINT 94: Cromwell JB SPATIAL COMPONENT MODELING IN VITAMIN B CRYSTAL STRUCTURES not submitted.
102. Preprint 95: Cromwell JB G Protein-Coupled Receptor Kinases Motifs, Hydrophobicity and Weakly Connected Components in Neighborhoods of Nitrogen Spatial Distributions not submitted.
103. Preprint 96: Cromwell JB Nitrogen and Oxygen Mutual Connections, Topological Metrics and Molecular Properties of G Protein Crystal Diversities not submitted.
104. Preprint 97: Cromwell JB Table Designs of Genomic Properties and Vocabularies for Uncharacterized Proteins in the Chinese White Pear not submitted.
105. Preprint 98: Cromwell JB 3-hydroxy-3-methylglutaryl-CoA C5 isoprenoid biosynthesis, mevalonate pathway not submitted.
106. PREPRINT 99: Cromwell JB FUNCTIONALLY WEIGHTED MULTIVARIATE DIFFERENCE EQUATION MODELING IN CLUSTERING ALGORITHM DESIGNS FOR SERINE HYDROXYMETHYLTRANSFERASE not submitted.
107. PREPRINT 100: Cromwell JB KERNEL CANONICAL CORRELATION ANALYSIS AND SPECTRAL CLUSTERING FOR 11 BETA-HYDROXYSTERIOD DEHYDROGENASE not submitted.
108. Preprint 101: Cromwell JB Spatial Physiochemical Models of Kelch, F-box and WD-40 Domain Proteins and Protein–Protein Interaction Mediation in Protein Ubiquitination not submitted.
109. Preprint 102: Cromwell JB Protein Turnover, Temperature, Gene Expression, and Oxidative Stress Response for Ubiquitin-Protein Ligase E3A Crystals not submitted.
110. Preprint 103: Cromwell JB Spatial Models of HECT Ubiquitin Ligase and the Tripartite Motif of TRIM proteins for Pathogen-Recognition and Proteasome Digestion not submitted.
111. Preprint 104: Cromwell JB Physicochemical Property Selection for BTB/POZ domain Crystals in Spatial Autogressive Models not submitted.
112. Preprint 105: Cromwell JB Spatial Crystal Model Comparision for Beta Propensity Amino Scales for Nucleotide Excision Repair Bridge Proteins CUL4A Amplification not submitted.
113. Preprint 106: Cromwell JB Compositional Amino Scale Spatial Models and SOCS Box Protein Kinase Inhibitors not submitted.
114. Preprint 107: Cromwell JB Spatial Filtering, Wavelet Dissimilarity and Side Chain Scale Modeles for Neddylation and Conformational Change Target Protein Incompatability not submitted.
115. Preprint 108: Cromwell JBComparision of Nonlinear Models for G-type main-sequence star (G2V) Magnetic Field Dynamics
116. Preprint 109: Cromwell JB Average Half Life Distributional Properties of Barrel-shaped Beta-Propeller structure with WD-40 repeats in G Proteins
117. Preprint 110: Cromwell JB The G Protein Average Half Life and pH Charge Relationship in Low Membership Temporal Categories. Submitted to Cancer Letters.
118. Preprint 111: Cromwell JB NSF Proposal for Plant Genome Research Program-An International Scientific Conference in Mathematical Botany For Multi-Species Proteomic Interaction Modeling Based on Structural Protein Family Motifs. Submitted to NSF Grant Fast Track.
119. Preprint 112: Cromwell JB Inhibitory Molecular Function and Feature Probability Classifications of Tetratricopeptide Repeat (TPR) Domain Sequence, Crystals and Chains. Submitted to Applied Mathematical Letters.

120. Preprint 113: Cromwell JB Variations in Tikhonov Regularization Estimators for H-bonding and Alpha Propensities in Glucose-dependent Insulinotropic Polypeptides. Submitted to Cancer Informatics.
121. Preprint 114: Cromwell JB A Modified Multidimensional Hybrid Genetic Algorithm Based on Matrix Condtioning for Molecular Feature Spaces and Projection Operators. Submitted to Applied Mathematical Letters.
122. Preprint 115: Cromwell JB Molecular Properting Filtering and Gaussian Mixture Modelling for Multiple Sequence Alignments of MHC class I Glycoproteins and T Cells for Immune Response, Antigen processing and Presentation. Submitted to Journal of Mathematical Biology.
123. Preprint 116: Cromwell JB Multiple Sequence Alignments Of Inhibitory Proteins and Molecular Feature Consistency with Markovian Transition Matrix Estimation. Submitted to Journal of Biomedical Informatics.
124. Preprint 117: Cromwell JB DNA Topoisomerase Topology and Binding Atomic Entanglement for Fixed Integer Coefficients Polynomial Representation. Submitted to Cancer Informatics.
125. Preprint 118: Cromwell JB Meta Heuristic Optimization of Shape Parameters for Multivariate Distributions in Alexander Polynomial Generation and Protein Classification. Submitted to Statistics and Probability Letters.
126. Preprint 119: Cromwell JB Maximum Likelihood Estimation of Multi-dimensional Distributional Parameters Based on Empirical Moment Matrices of Crystal Collections. Submitted to Computers in Biology and Medicine.
127. PREPRINT 120: Cromwell JB AN EIGHT PARAMETER, TWO DISTRIBUTION MIXTURE FOR OPTIMIZATION OF CRYSTAL ATOM MATRICES WITH PROTEIN FAMILY DIVERSITY. Submitted to Computers and Mathematics with Applications.
128. PREPRINT 121: Cromwell JB A DISTANCE, CLUSTER AND DENROGRAMIC ANALYSIS OF MOLECULAR PROPERTIES OF DNA BINDING AND OLIGOMERISATION DOMAINS OF P53 CRYSTAL MAPS. Submitted to Computational Statistics and Data Analysis.
129. PREPRINT 122: Cromwell JB A COMPARISON OF EMPIRICAL DISTRIBUTIONS FOR SAMPLED P53 AND RUNX1 CRYSTALS. Submitted to Mathematics and Computers in Simulation.
130. PREPRINT 123: Cromwell JB A FLUCTUATION ANALYSIS OF CRYSTAL STRUCTURES FOR RUNX1 AND P53 DOMAIN MUTATIONS OF Y220C, R280K, R273H AND R273C. Submitted to Computers and Mathematics with Applications.
131. Preprint 124: Cromwell JB Environmental Change, TP63 Expression Regulation and the Topological Molecular Properties of the 310 Helix Subsequences. Submitted to Cancer Letters.
132. Preprint 125: Cromwell JB Cell Cycle Regulation and Beta Sense Analysis of Periodicity of P53, P63 and P73 Crystal Structures. Submitted Applied Mathematics and Computation.
133. Preprint 126: Cromwell JB Organizational Features of Community Membership in the Small Scale P63 CoExpression Network. Submitted to Mathematics and Computers in Simulation.
134. Preprint 127: Cromwell JB Regulation of Epithelial Morphogenesis in TP53, TP63 and TP73 Triad Coexpression Relationships. Submitted to Mathematics and Computers in Simulation.
135. Preprint 128: Cromwell JB MAPK signaling, Glutamic Acid and Apoptosis in TP63 Co-Expression Community Relationships. Submitted to Applied Mathematics Letters
136. Preprint 129: Cromwell JB Transcription Regulatory Region Sequence-Specific DNA Binding and ATP-dependent Activation of SUMO1, SUMO2, SUMO3, SUMO4, UBE2I and UBE2K CoExpressions. Submitted to Applied Mathematics Letters.
137. Preprint 130: Cromwell JB OUTLIER CLASSIFICATION AND TESTING IN MULTI-SPECIES DAXX KERNEL BASED SPECTRAL CLUSTERS AND LOCAL FLUCTUATION PREDICTION. Submitted to Computational Statistics and Data Analysis.
138. Preprint 131: Cromwell JB Regulation of Cell Cycle Progression in Lymph Node Metastasis with CDKN1A, CDKN1B and PCNA. Submitted to Computational Biology and Chemistry.
139. Preprint 132: Cromwell JB Maximum Likelihood Estimation of Fluctuations with Bessel and Radial Basis Kernel Specification for DAXX Crystals. Submitted to Advances in Applied Mathematics.
140. Preprint 133: Cromwell JB Cyclin-Dependent Kinase Inhibitors and Interactions. Submitted to Mathematical Biosciences.
141. Preprint 134: Cromwell JB Small Ubiquitin-related Modifier Membership into P57 Network Communities Based on Relationship Category and Expression Half-Life
142. Preprint 135: Cromwell JB Caspase Activation Cascade and Comunity Network Relationships and Chemical Treatment Designs for Expression Modification in Carcinoma Cell Lines. Submitted to Bulletin of Mathematical Biology .
143. Preprint 136: Cromwell JB Cyclin-dependent Kinase Co-Expression of Community Networks and Half-Life Protein Properties with 14-3-3 Adapter Proteins
144. Preprint 137: Cromwell JB Taxonomic Diversity in the Epithelial Sodium Channel: Trait Distance in SCNN, SMAD UBE2 and WNK Variations
145. Preprint 138: Cromwell JB A Mathematical Model of Cellular Division Regulation with a Graph Motif of HIF1A, NR3C1, SUMO1, NCOA1, NCOA2, HIF3A, TP53 and NCOA1 Coexpression
146. Preprint 139: Cromwell JB The Histone Deacetylation Motif with Distributional Parameters and Exogenous Sensitivities in Cellular Processes
147. Preprint 140: Cromwell JB RXR-gamma and Gene Expression Regulation
148. Preprint 141: Cromwell JB A Mathematical Model of F-box-like/WD repeat-containing Protein-Protein Interaction and Proteasomal Degradation of Transcription Repressor Complexes with TP53
149. Preprint 142: Cromwell JB Wnt Signalling and Transcription Factor 7 Like 2 Repressor and Activation Models with CTNNB1 in Epithelial Cell Compartments

In this section the four courses on the Mathematical Learning Space Research Portfolio has ten examples for each course of articles for publication.

9 Course 1: DE Mathematical Biology

1. Cromwell JB Course 1 Lecture 1-3 Article: Sample: DNA Shape Categories for Statistical Learning Models of Gene Overexpression, Amplification, Mutation and Regulation in GastroIntestinal Cancer 胃腸癌における遺伝子過剰発現、増幅、突然変異および調節の統計学習モデルのためのDNA形状カテゴリー Ichō gan ni okeru idenshi kajō hatsugen, zōfuku, totsuzenhen'i oyobi chōsetsu no tōkei gakushū moderu no tame no dīenuē keijō kategorī not submitted.
2. Cromwell JB Course 1 Lecture 4-6 Article: Sample: Delayed Differential Equations for Intestinal Metaplasia of Gene Expression Modulation in Gastric Cancer 胃癌における遺伝子発現調節の腸化生のための遅延微分方程式 Igan ni okeru idenshi hatsugen chōsetsu no chō-ka-sei no tame no chien bibun hōteishiki not submitted.
3. Cromwell JB Course 1 Lecture 7-9 Article: Sample: Mucomodulators and Mucin Dependent Oncogenic cell Signaling and Immunomodulation in Gastric Cancer 胃癌におけるムコモジュレーターとムチン依存性発癌性細胞シグナル伝達および免疫調節 Igan ni okeru mukomojurētā to muchin isonsei hatsugan-sei saibō shigunaru dentatsu oyobi men'eki chōsetsu not submitted.
4. Cromwell JB Course 1 Lecture 10-12 Article: Sample: A Mathematical Model of Molecular Complexity and Epigenetic Modifications with Mucin Regulation in GastroIntestinal Cancers 胃腸癌におけるムチン調節を伴う分子複雑性および後成的修飾の数学モデル Ichō gan ni okeru muchin chōsetsu o tomonau bunshi fukuzatsu-seioyobi go Sei-teki shūshoku no sūgaku moderu not submitted.
5. Cromwell JB Course 1 Lecture 13-15 Article: Sample: Minimal Spanning Trees and Multivariate Nonparametric Distributional Testing for Gastric Cancer Chemosensitivity 胃癌化学感受性のための最小全域木と多変量ノンパラメトリック分布試験 Igan kagaku kanjusei no tame no saishō zen'ikigi to ta henryō not submitted. nonparametorikku bunpu shiken
6. Cromwell JB Course 1 Lecture 16-18 Article: Sample: A Mathematical Model of Multi-functional Regulators of Gut Homeostasis with Microbiota Diversity 腸内恒常性の微生物叢多様性の多機能レギュレーターの数学的モデル Chōnai kōjō-sei no biseibutsu kusamura tayō-sei no ta kinō regyurētā no sūgaku-teki moderu not submitted.
7. Cromwell JB Course 1 Lecture 19-21 Article: Sample:Differential Equation Specification and Polysyllabic Filtering for Medical and Chemical Vocabulary Interaction Models in GastroIntestinal Cancer Research 胃腸癌研究における医学的および化学的語彙相互作用モデルのための微分方程式仕様と多音節フィルタリング Ichō gan kenkyū ni okeru igaku-teki oyobi kagaku-teki goi sōgo sayō moderu no tame no bibun hōteishiki shiyō to taonsetsu firutaringu not submitted.
8. Cromwell JB Course 1 Lecture 22-24 Article: Sample: Stability Classification Designs for Differential Equation Systems of DNA, Protein and Compound Interaction Combinatorics DNA、タンパク質、化合物相互作用の組み合わせ方程式の微分方程式システムの安定性分類設計 Dīenuē, tanpakushitsu, kagōbutsu sōgo sayō no kumiawase hōteishiki no bibun hōteishiki shisutemu no antei-sei bunrui sekkei not submitted.
9. Cromwell JB Course 1 Lecture 25-27 Article: Sample: A Delayed Differential Equation Model of Phytochemicals in GastroIntestinal Cancer 胃腸癌における植物化学物質の遅延微分方程式モデル Ichō gan ni okeru shokubutsu kagaku busshitsu no chien bibun hōteishiki moderu not submitted.
10. Cromwell JB Course 1 Lecture 28-30 Article: Sample: Delayed Fractional Differential Equation Models in Gastrointestinal Cancer 消化器癌における遅延分数微分方程式モデルShōkakigan ni okeru chien bunsū bibun hōteishiki moderu not submitted.

1. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model of Viral Dynamics, Mutations and the Immune System ウイルスのダイナミクス、突然変異、免疫系の数学モデル Uirusu no dainamikusu, totsuzenhen'i, men'eki-kei no sūgaku moderu not submitted.
2. Cromwell JB Course 1 Lecture 19-21 Article: Sample: Nonlinear Time Series and Marginal Regression Models for International Viral Dynamics in Epidemiological Surveillance Networks 疫学的監視ネットワークにおける国際ウイルス動力学のための非線形時系列および周辺回帰モデル Ekigaku-teki kanshi nettowāku ni okeru kokusai uirusu dōryokugaku no tame no hisenkei jikeiretsu oyobi shūhen kaiki moderu not submitted.
3. Cromwell JB Course 1 Lecture 19-21 Article: Sample: Threshold Identification and Classification in a Nonlinear Time Series Analysis of International Viral Dynamics in EARS Epidemiological Surveillance Networks not submitted.
4. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model of Immunopathogenesis of Rheumatoid Arthritis with effects from Tocilizumab Dose Efficacy Treatment サンプル：トシリズマブの用量有効性治療の効果を伴う関節リウマチの免疫病原性の数学モデル Sanpuru: Toshirizumabu no yōryō yūkōsei chiryō no kōka o tomonau kansetsu riumachi no men'eki byōgen-sei no sūgaku moderunot submitted.
5. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model for Chloroquine Phagosome Interaction サンプル：クロロキンファゴソームの相互作用の数学モデル Sanpuru: Kurorokinfagosōmu no sōgo sayō no sūgaku moderu not submitted.
6. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model of Respiratory Disease and Pulmonary Kinetic Processes サンプル：呼吸器疾患と肺の運動過程の数学モデル Sanpuru: Kokyūkishikkan to hai no undō katei no sūgaku moderu not submitted.
7. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model of VP1-4 Spherical Viral Capsid Disassembly サンプル：VP1-4球状ウイルスカプシド分解の数学モデル Sanpuru: VP 1 - 4 kyūjō uirusukapushido bunkai no sūgaku moderu not submitted.
8. Cromwell JB Course 1 Lecture 19-21 Article: Sample: A Mathematical Model of Stress Induced Upregulation in Protein Responses ストレスの数学的モデルは、タンパク質応答のアップレギュレーションを誘発しました Sutoresu no sūgaku-teki moderu wa, tanpakushitsu ōtō no appuregyurēshon o yūhatsu shimashita not submitted.
9. Cromwell JB Course 1 Lecture 22-24 Article: Sample: A Mathematical Model of the Assembly of a 20S Proteasome with Peptide Post-Translational Modification ペプチド翻訳後修飾を伴う20Sプロテアソームのアセンブリの数学モデル Pepuchido hon'yakugoshūshoku o tomonau 20 esupuro teasōmu no asenburi no sūgaku moderu not submitted.
10. Cromwell JB Course 1 Lecture 25-27 Article: Sample: A Molecular Machine Learning Algorithm of Multi-Protein Complexes in The Digestion System 消化システムにおけるマルチタンパ

ク質複合体の分子機械学習アルゴリズム Shōka shisutemu ni okeru maruchi tanpakushitsu fukugō-tai no bunshi kikai gakushū arugorizumu not submitted.

11. Cromwell JB Course 1 Lecture 28-30 Article: Sample: A Mathematical Model of Normal Mode Superposition in Compound-Protein Interaction 化合物間相互作用におけるノーマルモード重ね合わせの数学モデル Kagōbutsu-kan sōgo sayō ni okeru nōmarumōdo kasane-awase no sūgaku moderu not submitted.

10 Course 2: Design of Signal Transduction Networks

1. Cromwell JB Course 2 Lecture 1-3 Article: Sample:A Mathematical model of Cell Cycle Process Regulation of Cell Cycle, Chromosome Segregation and G2/M Transition 細胞周期、染色体分離およびG2 / M遷移の細胞周期プロセス調節の数学モデル Saibō shūki, senshokutai bunri oyobi G 2/ M sen'i no saibō shūki purosesu chōsetsu no sūgaku moderu not submitted.
2. Cromwell JB Course 2 Lecture 4-6 Article: Sample: A Mathematical Model of Teleomere Maintenance and Telomeric DNA Binding テロメアの維持とテロメアDNA結合の数学モデル Teromea no iji to teromea dīenuē ketsugō no sūgaku moderu not submitted.
3. Cromwell JB Course 2 Lecture 7-9 Article: Sample: A Mathematical Model of Mitotic Biological Processes in a Gene Ontology 遺伝子オントロジーにおける有糸分裂生物学的プロセスの数学モデル Idenshi ontorojī ni okeru yūshibunretsu ikimonogaku-teki purosesu no sūgaku moderu not submitted.
4. Cromwell JB Course 2 Lecture 10-12 Article: Sample: A Mathematical Model of DNA Repair Genes/Proteins Based on Molecular Function and Signaling Pathway 分子機能とシグナル伝達経路に基づくDNA修復遺伝子/タンパク質の数学モデル Bunshi kinō to shigunaru dentatsu keiro ni motodzuku dīenuē shūfuku idenshi/ tanpakushitsu no sūgaku moderu not submitted.
5. Cromwell JB Course 2 Lecture 13-15 Article: Sample:A Mathematical Model of Glycoproteins of the Epithelia Mucosa in the Mucocilary System 粘液系の上皮粘膜の糖タンパク質の数学モデル Nen'eki-kei no jōhi nenmaku no tō tanpakushitsu no sūgaku moderu not submitted.
6. Cromwell JB Course 2 Lecture 16-18 Article: Sample: A Mathematical Model of Transcriptional Activity for Helix-Loop-Helix Proteins ヘリックスループヘリックスタンパク質の転写活性の数学モデル Herikkusurūpuherikkusutanpaku-shitsu no tensha kassei no sūgaku moderu not submitted.
7. Cromwell JB Course 2 Lecture 19-21 Article: Sample: A Delay Differential Equation Model for Signal Transduction in Hepatocellular Carcinoma 肝細胞癌におけるシグナル伝達の遅延微分方程式モデル Kansaibōgan ni okeru shigunaru dentatsu no chien bibun hōteishiki moderu not submitted.
8. Cromwell JB Course 2 Lecture 22-24 Article: Sample: A Mathematical Model of Heterodimer DNA helix Bending ヘテロダイマーDNAヘリックス曲げの数学モデル Heterodaimā dīenuē herikkusu mage no sūgaku moderu not submitted.
9. Cromwell JB Course 2 Lecture 25-27 Article: Sample: A Mathematical Model of the Regulation of Intracellular Signaling Cascades 細胞内シグナル伝達カスケードの調節の数学モデル Saibō-nai shigunaru dentatsu kasukēdo no chōsetsu no sūgaku moderu not submitted.
10. Cromwell JB Course 2 Lecture 28-30 Article: Sample: A Mathematical Model of Motif Mediation in the Heterotrimeric G-protein Signaling Pathway ヘテロ三量体Gタンパク質シグナル伝達経路におけるモチーフ調停の数学モデル Hetero san ryōtai G tanpakushitsu shigunaru dentatsu keiro ni okeru mochīfu chōtei no sūgaku moderu not submitted.

11 Course 3: Machine Learning with Topological Dynamics

1. Cromwell JB Course 3 Lecture 1-3 Article: Sample: A Mathematical Model of Ribosome Flow リボソーム流動の数学モデル Ribosōmu ryūdō no sūgaku moderu not submitted.
2. Cromwell JB Course 3 Lecture 4-6 Article: Sample: A Mathematical Model of Transcriptional, Translational, Protein Folding, and Post Translational Errors 転写、翻訳、タンパク質折りたたみ、および翻訳後エラーの数学モデル Tensha, hon'yaku, tanpakushitsu oritatami, oyobi hon'yaku-go erā no sūgaku moderu not submitted.
3. Cromwell JB Course 3 Lecture 7-9 Article: Sample: A Mathematical Model of the Biosynthesis of Alkaloids from Shikimate Pathway シキミ酸経路からのアルカロイドの生合成の数学モデル Shikimi san keiro kara no arukaroido no nama gōsei no sūgaku moderu not submitted.
4. Cromwell JB Course 3 Lecture 10-12 Article: Sample: A Mathematical Model of WDR and G Quadruplexes WDR およびG四重鎖の数学モデル WDR oyobi G shi kasanegusari no sūgaku moderu not submitted.
5. Cromwell JB Course 3 Lecture 13-15 Article: Sample: A QSAR Feature Matrix Design For Protein-Compound Interaction タンパク質と化合物の相互作用のためのQSAR機能マトリックス設計 Tanpakushitsu to kagōbutsu no sōgo sayō no tame no QSAR kinō matorikkusu sekkei not submitted.
6. Cromwell JB Course 3 Lecture 16-18 Article: Sample: A Mathematical Model of Ribosome Model with Circular mRNA 円形mRNAを用いたリボソームモデルの数学的モデル Enkei mRNA o mochiita ribosōmumoderu no sūgaku-teki moderunot submitted.
7. Cromwell JB Course 3 Lecture 19-21 Article: Sample: A Mathematical Model of Stress Induced Upregulation in Protein Responses ストレスの数学的モデルは、タンパク質応答のアップレギュレーションを誘発しました Sutoresu no sūgaku-teki moderu wa, tanpakushitsu ōtō no appuregyurēshon o yūhatsu shimashita not submitted.
8. Cromwell JB Course 3 Lecture 22-24 Article: Sample: A Mathematical Model of the Assembly of a 20S Proteasome with Peptide Post-Translational Modification ペプチド翻訳後修飾を伴う20Sプロテアソームのアセンブリの数学モデル Pepuchido hon'yakugoshūshoku o tomonau 20 esupuro teasōmu no asenburi no sūgaku moderu not submitted.
9. Cromwell JB Course 3 Lecture 25-27 Article: Sample: A Molecular Machine Learning Algorithm of Multi-Protein Complexes in The Digestion System 消化システムにおけるマルチタンパク質複合体の分子機械学習アルゴリズム Shōka shisutemu ni okeru maruchi tanpakushitsu fukugō-tai no bunshi kikai gakushū arugorizumu not submitted.
10. Cromwell JB Course 3 Lecture 28-30 Article: Sample: A Mathematical Model of Normal Mode Superposition in Compound-Protein Interaction 化合物間相互作用におけるノーマルモード重ね合わせの数学モデル Kagōbutsu-kan sōgo sayō ni okeru nōmarumōdo kasane-awase no sūgaku moderunot submitted.

12 Course 4: Music and Mathematics

1. Cromwell JB Course 4 Lecture 1-3: Sample: A Delayed Markov Model of Dance Choreography based on Topological Transformations 位相変換に基づくダンス振り付けの遅延マルコフモデル Isō henkan ni motodzuku dansu furitsuke no chien marukofumoderu not submitted.

2. Cromwell JB Course 4 Lecture 4-6: Sample: A Mathematical Model for Romantic Music Based on Filter Design not submitted.
3. Course 4 Lecture 7-9: Sample: Course 4 Lecture 7-9 Sample: A Mathematical Model for a Classical Music Composition クラシック音楽の作曲のための数学モデル Kurashikku ongaku no sakkyoku no tame no sūgaku moderu not submitted.
4. Cromwell JB Course 4 Lecture 10-12: Sample: A Mathematical Model for a Jazz Music Composition ジャズ音楽の作曲のための数学モデル Jazu ongaku no sakkyoku no tame no sūgaku moderu submitted to
5. Cromwell JB Course 4 Lecture 13-15: Sample: Semi-Markov Representation for Octave Transition Model with Non-Symmetric Jumps in the Transition Rate Designs not submitted. 遷移速度設計における非対称ジャンプを伴うオクターブ遷移モデルのセミマルコフ表現 Sen'i sokudo sekkei ni okeru hitaishō janpu o tomonau okutābu sen'i moderu no semimarukofu hyōgen not submitted.
6. Cromwell JB Course 4 Lecture 16-18: Sample: Frequency Based Markov Chains with Recurrent Distributional Positive Feedback Models for Classical Music Compositions not submitted. クラシック音楽作曲のための反復分布正帰還モデルを用いた周波数ベースのマルコフ連鎖 Kurashikku ongaku sakkyoku no tame no hanpuku bunpu sei kikan moderu o mochiita shūhasū bēsu no marukofu rensa not submitted.
7. Cromwell JB Course 4 Lecture 19-21: Sample: Recommender System Design of Beginner Piano Classical Composition Motifs Based on Sound Complexity and Diversity Indices 音の複雑さと多様性の指標に基づく初心者のピアノ古典作曲モチーフの推薦システム設計 Oto no fukuzatsu-sa to tayō-sei no shihyō ni motodzuku shoshinsha no piano koten sakkyoku mochīfu no suisen shisutemusetsukeinot submitted.
8. Cromwell JB Course 4 Lecture 22-24: Sample: A Voice Response ChattoBotto for Numerical Sequence Cartography not submitted.
9. Cromwell JB Course 4 Lecture 25-27 : Sample: A Mathematical Model for a Jazz Music Composition ジャズ音楽の作曲のための数学モデル Jazu ongaku no sakkyoku no tame no sūgaku moderu not submitted.
10. Cromwell JB Course 4 Lecture 28-30: Sample: Motif Complexity Design of Modal Patterns for Smooth Jazz Compositions in Classical Duplet-Triplet Clusters モチーフの複雑さの設計古典的なデュプレット-トリプレットクラスターでのスムーズなジャズ曲のモーダルパターン Mochīfu no fukuzatsu-sa no sekkei koten-tekina de yupuretto - toripurettokurasutā de no sumūzuna jazu kyoku no mōdarupatān not submitted.

13 University Research and Teaching Positions

In this section, Table 2 has the year, university/company, location and title/role for different university and teaching positions that were helpful in the completion of research goals.

Year	University/Company	Location	Title
2017	Arizona State University -College of Health Solutions-Department of Biomedical Informatics	Tempe Arizona	Web Application Developer
2016	Wyzant	Tempe Arizona	Mathematics Tutor
2010-2011	University of Pittsburgh - School of Medicine- Department of Biomedical Informatics	Pittsburgh Pa	Lecturer Research Statistical Software Developer

Table 2: Selected Recent Research Positions to Attain Research Goals

14 Hobbies

1. Composing and Performing Classical and Smooth Jazz music クラシックでスムーズなジャズ音楽の作曲と演奏 Kurashikku de sumūzuna jazu ongaku no sakkyoku to ensō
2. Second Language Acquistion with Mandarin and Japanese 北京語と日本語による第二言語習得 Pekin-go to nihongo ni yoru dainigengoshūtoku
3. Graphic Design and Botanical Scientific Illustrations グラフィックデザインと植物科学イラスト Gurafikku dezain to shokubutsu kagaku irasuto
4. Playing the Piano and Digital Keyboard ピアノとデジタルキーボードを演奏するPiano to dejitarukībōdo o ensō suru
5. Sports-Basketball and Table and Court Tennis スポーツバスケットボール、テーブル、コートテニス Supōtsubasukettobōru, tēburu, kōtotenisu
6. International Music
7. Fashion, Clothing Design and Wood Carpentry ファッション、服飾デザイン、木工 Fasshon, fukushoku dezain, mokkō