



22nd International Mathematics Conference 2021

10-11 December 2021 (Virtual)

Theme: Mathematics for a better world

Organized by
Bangladesh Mathematical Society (BMS)

Program Schedule

[The schedule of the conference is specified according to the **Bangladesh Standard Time (GMT+6).**]

Day-I: Friday 10 December 2021	
9:30 – 10:00 AM	Inaugural Ceremony
Zoom Link	https://bdren.zoom.us/j/3214931918?pwd=QU5HN3FMK2VWVGx5bnZFRS95M1ROQT09 Meeting ID: 3214931918 Password: 251973
9:30 – 9:35 AM	<ul style="list-style-type: none"> • <i>Welcome Address by the Conference Secretary</i> Professor Dr. Md. Showkat Ali Secretary, Bangladesh Mathematical Society
9:35 – 9:40 AM	<ul style="list-style-type: none"> • <i>Address by the Special Guest</i> Professor Dr. Md. Abdus Samad Dean, Faculty of Science, University of Dhaka
9:40 – 9:50 AM	<ul style="list-style-type: none"> • <i>Address by the Chief Guest</i> Professor Dr. Md. Akhtaruzzaman Honorable Vice Chancellor, University of Dhaka
9:50 – 9:55 AM	<ul style="list-style-type: none"> • <i>Presidential Address</i> Professor Dr. Nurul Alam Khan President, Bangladesh Mathematical Society
10:00 – 10:50AM Keynote Session I	
Session Chair	Professor Dr. Md. Abdus Samad, DU
Speaker	Professor Dr. Meir Shillor Distinguished Professor, Oakland University, USA <i>Recent Results on Dynamic Contact, Friction, Heat Exchange, and Debonding</i>
11:00 – 12:30 PM Technical Session- IA Probability and Stochastic Process	
Zoom Link	https://bdren.zoom.us/j/68416618164?pwd=RW5hWkJtbTVKUEJsQ3NFbUZyVUxzUT09 Meeting ID: 684 1661 8164 Password: 954255



Session Chair	Professor Dr. Shajedul Karim, SUST
Session Co-Chair	Dr. A. B. M. Shahadat Hossain, DU
Invited Talk 11:00AM – 11:25PM	22BMS-IMC-IT001 Dr. Kaniz Fatema Nipa Odum School of Ecology, University of Georgia, USA <i>Disease Emergence in Multi-Patch Stochastic Epidemic Models with Demographic and Seasonal Variability</i>
Contributory Talks 11:25AM – 12:30PM	22BMS-IMC-CT009 <i>Smart Monitoring for Anxiety, Depression and Cardiovascular effect in Post COVID-19 Survivors</i> Mahfuza Khatun, AIUB
	22BMS-IMC-CT015 <i>Supervised Regularized Multidimensional Scaling Using Weighted Stress Measure</i> Md. Tohidul Islam, DU
	22BMS-IMC-CT026 <i>Blur Face Recognition using Blur Metric and Some Variants of Supervised Distance Preserving Projection</i> Mohiuddin Mohi, DU
	22BMS-IMC-CT031 <i>Socio-demographic determinants of Type 2 diabetes among adolescents in Bangladesh: a cross-sectional study</i> Md. Mortuza Ahmmed, AIUB
	22BMS-IMC-CT037 <i>Multidimensional Scaling with Interval Valued Dissimilarities with Applications to Data Mining</i> Md. Anawarul Islam Bhuiyan, DU
11:00 – 12:30 PM	Technical Session- IB Computational Fluid Dynamics
Zoom Link	https://bdren.zoom.us/j/5545400976?pwd=Tm5MYkdicGV6SzdUNUs1UzI0bHRwQT09 Meeting ID: 554 540 0976 Password: 895933
Session Chair	Professor Dr. Mahmud Alam, KU
Session Co-Chair	Professor Dr. Mahtab Uddin Ahmed, JU
Invited Talk 11:00 – 11:25AM	22BMS-IMC-IT002 Professor Dr. Mohammad Ferdows Department of Applied Mathematics, University of Dhaka <i>Formation dissociation and chemical structure in the carbon dioxide-water Molecular system</i>
Contributory Talks 11:25AM – 12:30PM	22BMS-IMC-CT003 <i>Unsteady natural convection in a valley shaped trapezoidal cavity heated from below</i> Md. Mahafujur Rahman, JnU
	22BMS-IMC-CT004



	<p>Magnetohydrodynamic natural convection in a square cavity using partly heated elliptic block M. Sajjad Hossain, AUST</p> <p>22BMS-IMC-CT006 Numerical simulation and heatline analysis for flow of nanofluid in a double lid driven cavity containing a heat generating object: Effect of Richardson number Ayesha Siddiqua, AIUB</p> <p>22BMS-IMC-CT008 Heat and mass transfer response in MHD Natural convection flow due to oscillating surface temperature and concentration Sharmina Hussain, BRACU</p> <p>22BMS-IMC-CT012 Performance of Dynamic Smagorinsky Model and Differential Equation Wall Model in Large Eddy Simulation of Turbulent Channel Flow M. Azizul Hoque, AUST</p>
11:00 – 12:30PM	Technical Session – IC Mathematical Biology
Zoom Link	https://bdren.zoom.us/j/9645883309?pwd=eTR0OEUzaDM3YjBjQzdzZzNLOVRzUT09 Meeting ID: 9645883309 Password: 318969
Session Chair	Professor Dr. Md. Shahidul Islam, DU
Session Co-Chair	Dr. Md. Kamrujjaman, DU
Invited Talk 11:00 – 11:25AM	<p>22BMS-IMC-IT003 Professor Dr. Joydev Chattopadhyay Agricultural & Ecological Research Unit, Indian Statistical Institute, India TBA</p>
Contributory Talks 11:25AM – 12:30PM	<p>22BMS-IMC-CT022 Global dynamics and control strategies of an epidemic model having logistic Growth, non-monotone incidence with the impact of limited hospital beds Pritam Saha, Calcutta Univ.</p> <p>22BMS-IMC-CT023 Rumor Spreading Model Considering Hesitating, Forgetting and Self-remembering Mechanisms in Complex Social Network Nahid Hasan, DU</p> <p>22BMS-IMC-CT025 SVEIR Rumor spreading model in a complex social network with hesitating, forgetting, and emotion mechanisms Sujana Azmi Polin, DU</p> <p>22BMS-IMC-CT035 Prediction and mathematical analysis of the outbreak of coronavirus (COVID-19) in Bangladesh</p>



	S. M. Sayedur Rahman, SUST 22BMS-IMC-CT041 Assessing the role of PWID and sex workers in spreading HIV/AIDS in population Ashrafi M. Niger, DU
12:30 – 3:00 PM	Prayer and Lunch Break
3:00 – 4:30 PM	Technical Session – IIA Probability and Stochastic Process
Zoom Link	https://bdren.zoom.us/j/69011538242?pwd=L00yY0x5b0tOTk4wblk3T3lrSS90dz09 Meeting ID: 69011538242 Password: 381958
Session Chair	Professor Dr. Manirul Alam Sarkar, BUET
Session Co-Chair	Dr. Litan Kumar Saha, DU
Invited Talk 3:00 – 3:25PM	22BMS-IMC-IT004 Professor Dr. Kalyan Das, National Institute of Food Technology Entrepreneurship and Management, India Algae-Zooplankton Species Model: Mathematical Approach of Delay with Stochastic and Diffusion
Contributory Talks 3:25PM – 4:30PM	22BMS-IMC-CT040 A study to find the main reasons for waterlogging in the urban areas using AHP Aparupa Barua, Premier Univ.
	22BMS-IMC-CT042 Estimation of prayer times: a case study for Bangladesh and its surrounding Rezadur Rahman, RU
	22BMS-IMC-CT055 Improved Histogram with application to real world data Adam M. B., Malaysia
	22BMS-IMC-CT065 On Some Confidence Intervals for Estimating the AR(1) Parameter: Simulation and Application Shipra Banik, IUB
	22BMS-IMC-CT096 Stochastic Programming Problem and its Application in Real Life Afsana Akter Mitu, DU
3:00 – 4:30 PM	Technical Session – IIB Computational Fluid Dynamics
Zoom Link	https://bdren.zoom.us/j/67019017124?pwd=YVYvSlQwaUlnV1p0bno1N1pleDZ2UT09 Meeting ID: 67019017124 Password: 222021
Session Chair	Professor Dr. Md. Rezaul Karim, JnU
Session Co-Chair	Dr. Javid Iqbal Bangalee, DU
Invited Talk	22BMS-IMC-IT005



3:00 – 3:25PM	Professor Dr. Md. Mamun Molla Department of Mathematics & Physics North South University, Dhaka <i>Simulation of Air Flow and Pollutant Dispersion in a Model Street Canyon Intersection of a City</i>
Contributory Talks 3:25PM – 4:30PM	22BMS-IMC-CT018 <i>Unsteady MHD Free Convective Boundary Layer Flow over a Vertical Permeable Plate with Heat Generation</i> M. Jahir Uddin, Feni College
	22BMS-IMC-CT019 <i>Numerical Study of Inhalation Flow along Human Lung Model Channel of 18th Generation</i> Ripa Ghosh, JU
	22BMS-IMC-CT024 <i>Effects of stenosis geometry and severity in the bifurcated left main coronary artery</i> J. T. Farin, DU
	22BMS-IMC-CT028 <i>Investigate the coronary arterial hemodynamic parameters due to plaques associated with three-dimensional idealized vascular right coronary artery</i> Sabrina Rashid, DU
	22BMS-IMC-CT029 <i>Unsteady Magneto-convective Heat-Mass Transport by Micropolar Binary Mixture passing a Permeable Surface: Effects of Magnetic Field and Suction</i> Md. Mosharrof Hossain, B M College
3:00 – 4:30 PM	Technical Session – IIC Mathematical Biology
Zoom Link	Meeting ID: 61654799479 Password: 9876
Session Chair	Professor Dr. Md. Forhad Uddin, BUET
Session Co-Chair	Dr. K. M. Ariful Kabir, BUET
Invited Talk 3:00 – 3:25PM	22BMS-IMC-IT006 Dr. M. Humayun Kabir Department of Mathematics, Jahangirnagar University <i>Mechanism of vegetation patterns in semiarid ecosystem: A reaction-diffusion modeling approach</i>
Contributory Talks 3:25PM – 4:30PM	22BMS-IMC-CT044 <i>The Effect of Vaccination and Quarantine as Control Strategies on COVID-19 with Co-morbidity</i> Amit Kumar Saha, DU
	22BMS-IMC-CT082 <i>Analysis of a delayed eco-epidemiological system of one prey and two predator with non-monotonic functional response subjected to the joint effect of disease transmission and selective harvesting</i> Sajjad Hossain, India
	22BMS-IMC-CT054



	<p>Two competitive species diffusion model with harvesting: A comparative study between two space-depend harvesting function Mashih Inb Yasin Adan, DU</p> <p>22BMS-IMC-CT056 The Combined Impact of Non-Pharmaceutical Interventions and Vaccination to Control the Communicable Disease Md. Jasim Uddin, DU</p> <p>22BMS-IMC-CT063 Qualitative Study of Hepatitis B Virus Dose-Structured Vaccination Model Jannatun Nayeem, AUST</p>
4:40 – 5:30 PM	Keynote Session II
Zoom Link	<p>https://bdren.zoom.us/j/9645883309?pwd=eTR0OEUzaDM3YjBjQzdZzNLQVRzUT09 Meeting ID: 9645883309 Password: 318969</p>
Session Chair	Professor Dr. Md. Haider Ali Biswas, KU
Speaker	<p>Professor Dr. Asep K. Supriatna Padjadjaran University, Indonesia The effect of wolbachia infection in dengue transmission model with age-dependent survival Rates</p>
6:00 – 7:30 PM	Technical Session – IIIA Computational Mathematics
Zoom Link	<p>https://bdren.zoom.us/j/66142914965?pwd=dFdiSDE2Q3JJEcC9MR09EMzFtV2pkZz09 Meeting ID: 661 4291 4965 Password: 222021</p>
Session Chair	Professor Dr. Md. Shafiqul Islam, DU
Session Co-Chair	Professor Dr. Salma Parvin, BUET
Invited Talk 6:00 – 6:25PM	<p>22BMS-IMC-IT007 Dr. Mohammad Sahadet Hossain Department of Mathematics & Physics North South University, Dhaka Model Reduction of Large Scale Systems: A Branch in Applied Mathematics and Modeling</p>
Contributory Talks 6:25PM – 7:30PM	<p>22BMS-IMC-CT060 Numerical Solution of 4th Order Linear Fractional Order Boundary Value Problems by GWR Method Umme Roman, GUB</p>
	<p>22BMS-IMC-CT064 Riccati-based feedback stabilization of incompressible Navier-Stokes models via reduced-order modelling by iterative rational Krylov algorithm Mahtab Uddin, UIU</p>
	22BMS-IMC-CT069



	<p>Iterative system reduction of the PLTV index 2 model using the generalized inverse procedure Atia Afroz, NSU</p>
	<p>22BMS-IMC-CT070 Numerical analysis of two phase flow on porous curved channel with gravity Md. Khalilur Rahman, BUET</p>
	<p>22BMS-IMC-CT094 Numerical Study of Boundary Value Problems using Finite difference method (FDM) Md. Amirul Islam, UU</p>
6:00 – 7:30 PM	Technical Session – IIIB Computational Fluid Dynamics
Zoom Link	<p>https://bdren.zoom.us/j/5545400976?pwd=Tm5MYkdicGV6SzdUNUs1UzI0bHRwQT09 Meeting ID: 554 540 0976 Password: 895933</p>
Session Chair	Professor Dr. Mohammad Ferdows, DU
Session Co-Chair	Professor Dr. Ujjwal Kumar Deb, CUET
<p>Invited Talk 6:00 – 6:25PM</p>	<p>22BMS-IMC-IT008 Professor Bidyut Baran Saha International Institute for Carbon-Neutral Energy Research, Kyushu University, Japan Role of Adsorption Thermodynamics and Sorption Properties for Sustainable Energy Conversion Applications</p>
<p>Contributory Talks 6:25PM – 7:30PM</p>	<p>22BMS-IMC-CT032 The Impact of Elastic and Rigid Arterial Models Wall in Coronary Artery on Serial Stenoses Idealized Models Bibi Hajera, AUST</p>
	<p>22BMS-IMC-CT038 Coronary artery blood flow simulation in reduced order model to detect cardiovascular diseases based on biomedical imaging K. E. Haque, DU</p>
	<p>22BMS-IMC-CT053 Heat Transfer Analysis of Mixed Convection in Arc-cavity with Non-linear Temperature on the Wall Utilizing Cu-nanofluid Mehedi-Ul-Hasan, BUET</p>
	<p>22BMS-IMC-CT059 Unsteady Convective Heat and Mass Transfer Flow over moving sheet in a Saturated Permeable Surface with Chemical Reaction M. Hasanuzzaman, KUET</p>
	<p>22BMS-IMC-CT061 Upscaling of two-phase flows in porous media Sohely Sharmin, Belgium</p>



6:00 – 7:30 PM	Technical Session – IIC Mathematical Biology
Zoom Link	https://bdren.zoom.us/j/63762560469?pwd=WjluMGpwb3oySUZEOUWpJMiszd051UT09 Session ID: 63762560469 Session Password: 8950
Session Chair	Professor Dr. Md. Haider Ali Biswas, KU
Session Co-Chair	Dr. Mostak Ahmed, JnU
Invited Talk 6:00 – 6:25PM	22BMS-IMC-IT009 Professor Dr. M. Osman Gani Department of Mathematics, Jahangirnagar University <i>Existence and stability of Wavetrains in a modified FitzHugh-Nagumo model of nerve cell dynamics</i>
Contributory Talks 6:25PM – 7:30PM	22BMS-IMC-CT072 <i>Lyapunov functions and global stability for a spatially diffusive SIR epidemic model</i> Md. Saiful Islam, DU
	22BMS-IMC-CT073 <i>Computational Bifurcation Analysis of Multi-parameter of SEIR Model of COVID-19</i> Md. Habibur Rahman, JnU
	22BMS-IMC-CT074 <i>Mathematical Model for COVID-19 and Its Stability Analysis</i> Md. Habibur Rahman, JnU
	22BMS-IMC-CT079 <i>Modeling on Clinical Outcomes of Covid-19 Patients with Baseline Comorbidities</i> Razia Sultana, RU
	22BMS-IMC-CT080 <i>Dynamics of Spruce budworms and single species competition models with bifurcation analysis</i> Farah Tasnim, DU

Day-II: Saturday 11 December 2021

9:00 – 10:30AM	Technical Session – IVA Partial Differential Equations
Zoom Link	https://bdren.zoom.us/j/2701228062 Meeting ID: 2701228062 No password is required.
Session Chair	Professor Dr. Samir Kumar Bhowmik, DU
Session Co-Chair	Professor Dr. M. Harunor Rashid, RU
Invited Talk 9:00 – 9:25AM	22BMS-IMC-IT010 Professor Dr. Gour Chandra Paul Department of Mathematics, Rajshahi University TBA
Contributory Talks 9:25AM – 10:30AM	22BMS-IMC-CT007 <i>Characteristics of non-elastic interactions of lump-bell fusion and fission solutions to the (2+ 1)-dimensional Calogero-Bogoyavlenskii-Schiff (CBS) equation via Hirota bilinear method</i>



	Nur Hasan Mahmud Shahan, BUET
	22BMS-IMC-CT011 Dynamics of bidirectional wave solutions to the two-mode fifth-order Kaup-Kuperchmidt equation via its analytic solutions Nishat Tamanna, BSMRSTU
	22BMS-IMC-CT017 Investigation of Wave Direction and Wave Height Attenuation by Coastal Vegetation Motiur Rahman, DUET
	22BMS-IMC-CT033 Mann-Kendall Trend Detection for Precipitation and Temperature in Bangladesh Lipon Chndra Das, CU
	22BMS-IMC-CT036 An analytical study for Fisher-KPP equation by using Homotopy analysis method Tauhida, RU
9:00 – 10:30 AM	Technical Session- IVB Computational Fluid Dynamics
Zoom Link	https://bdren.zoom.us/j/66875586049 Meeting ID: 66875586049 No password is required
Session Chair	Professor Dr. Md. Ashraf Uddin, SUST
Session Co-Chair	Dr. Nepal Chandra Roy, DU
Invited Talk 9:00 – 9:25AM	22BMS-IMC-IT011 Professor Dr. Shariful Alam Department of Mathematics, Jagannath University Advanced Mathematical Modelling of Nanofluids and its Real Life Applications
Contributory Talks 9:25AM – 10:30AM	22BMS-IMC-CT066 Numerical simulation of Magnetohydrodynamic free convection in a nanofluid-filled wavy cavity Md. Shamim Hasan, BUET
	22BMS-IMC-CT076 Shanks Transformation for the asymptotic relation of heat transfer rate and Rayleigh number for convection in mantle Sumaiya B. Islam, DU
	22BMS-IMC-CT088 Effects of Reynolds and Grashof numbers on Mixed Convection of Non-Newtonian Fluid Flows in a Lid-Driven Trapezoidal Cavity with Discrete Heating Shuvra Chowdhury, BUET
	22BMS-IMC-CT089 Numerical Analysis of Laminar Natural, Mixed and Forced Convection Heat Transfer in a Vented Cavity with Experimental Validation Sadman Akib Tamim, BUET



9:00 – 10:30 AM	Technical Session - IVC	Mathematical Biology
Zoom Link	https://bdren.zoom.us/j/63627087344?pwd=VVlzNVV3elhiMDVrdnd1ZGJuL0l5UT09 Meeting ID: 636 2708 7344 Password: 940478	
Session Chair	Professor Dr. Mohammad Osman Gani, JU	
Session Co-Chair	Dr. M. Humayun Kabir, JU	
Invited Talk 9:00 – 9:25AM	22BMS-IMC-IT012 Dr. Md. Kamrujjaman Department of Mathematics, University of Dhaka <i>Vaccine efficacy and how long the COVID-19 will persist as a pandemic: Multifarious case studies</i>	
Contributory Talks 9:25AM – 10:30AM	22BMS-IMC-CT049 <i>Computational and Theoretical Analysis of a Stochastic Host-Vector Malaria Model with Controlling Strategy</i> Asma AkterAkhi, DU	
	22BMS-IMC-CT085 <i>Analyzing the trends of Bangladesh's Urban and Rural Population Growth through Mathematical Modeling</i> Rina Paul, SUST	
	22BMS-IMC-CT086 <i>Stability of Periodic Traveling Wave Solutions in Three-Component Brusselator Reaction-Diffusion Model</i> A K M Nazimuddin, EWU	
	22BMS-IMC-CT092 <i>Mathematical analysis of the epidemic model with salmonella bacterial infection</i> Tahera Parvin, KU	
	22BMS-IMC-CT099 <i>Effect of time delay in the Aliev-Panfilov model of cardiac Excitation</i> Naga S. Lakshmi, Auxilium College, India	
10:40 – 12:10 PM	Technical Session – VA	Algebra & Analysis
Zoom Link	https://bdren.zoom.us/j/65595569971?pwd=cUdOVHAvZ0MyS2crdlZsV1FIQk9UZz09 Meeting ID: 655 9556 9971 Password: 781947	
Session Chair	Professor Dr. Md. Asaduzzaman, RU	
Session Co-Chair	Dr. Tania Sharmin Khaleque, DU	
Invited Talk 10:40 – 11:05AM	22BMS-IMC-IT013 Professor Dr. B. C. Tripathy Department of Mathematics, Tripura University, India <i>Relative Uniform Convergence of Sequences of Positive Linear Functions</i>	
	22BMS-IMC-CT001	



Contributory Talks 11:05AM – 12:10PM	Higher rank quadratic algebra of the N-dimensional quantum SW model Md. Fazlul Hoque, PUST
	22BMS-IMC-CT002 Results on centralizers of semiprime gamma semirings Nandita Paul Nipa, PUST
	22BMS-IMC-CT005 An Eigen polygon technique and its application to the non-uniform Doo-Sabin subdivision surface Md. Nur Alam, PUST
	22BMS-IMC-CT016 Recognition and enumeration of unlabeled N-free posets by using the poset matrix S. U. Mohammad, SUST
	22BMS-IMC-CT030 Lie algebra realizations, superintegrable system and Energy spectra Mohasena Ahmed, PUST
10:40 –12:10 PM	Technical Session – VB Computational Fluid Dynamics
Zoom Link	https://bdren.zoom.us/j/69648278625?pwd=SIBsMUM3ZnduYjYSGNhSldqMXUvdz09 Meeting ID: 696 4827 8625 Password: 527275
Session Chair	Professor Dr. Md. Shariful Alam, JnU
Session Co-Chair	Dr. Shidhartha Bhowmick, JnU
Invited Talk 10:40 – 11:05AM	22BMS-IMC-IT014 Professor Dr. Mohammad Mansur Rahman Department of Mathematics Sultan Qaboos University, Oman Heat Transport in Porous Medium: Applications to Nanoscience
Contributory Talks 11:05AM – 12:10PM	22BMS-IMC-CT090 Multisegment Integration Method for Solving Blasius and Pohlhausen Equations of Boundary Layers Ahmed Zubayer Raiyan, BUET
	22BMS-IMC-CT091 Numerical Analysis of Conjugate MHD Mixed Convection in a Lid-Driven Partitioned Cavity R. K. B. M. Rizmi, BUET
	22BMS-IMC-CT093 Magnetohydrodynamic natural convection in a square cavity using partly heated elliptic block Muhammad Sajjad Hossain, AUST
	22BMS-IMC-CT097 MHD natural convection of non-Newtonian fluid in a porous square cavity having non uniform wavy walls Md. Sayeduzzaman, BU
	22BMS-IMC-CT098



	Lattice Boltzmann simulation of thermal and flow friction in a lid-driven pentagonal enclosure Runu Biswas, BOU
10:40 – 12:10 PM	Technical Session – VC Partial Differential Equations
Zoom Link	https://bdren.zoom.us/j/68545248743?pwd=VEhlVmxVOC9WZURtYU9kZ2lrVG5odz09 Session ID: 68545248743 Password: 5549
Session Chair	Professor Dr. Ali Akbar, RU
Session Co-Chair	Professor Dr. B. M. Ikramul Haque, KUET
Invited Talk 10:40 – 11:05AM	22BMS-IMC-IT015 Professor Dr. Ujjwal Kumar Deb Department of Mathematics, Chittagong University of Engineering & Technology Microalgae Based Biofuel: A Bottleneck in Optimization
Contributory Talks 11:05AM – 12:10PM	22BMS-IMC-CT048 A New Solution of Third Order Stokes Wave and its Integral Properties Zahangir Alam, RU
	22BMS-IMC-CT051 Characteristics of non-elastic interactions of lump-bell fusion and fission solutions to the (2+ 1)-dimensional Calogero-Bogoyavlenskii-Schiff (CBS) equation via Hirota bilinear method Nur Hasan Mahmud Shahen, BUET
	22BMS-IMC-CT057 Solutions of Homogeneous and Non-homogeneous wave equations using He's Variational Iteration Method M. Aman Ullah, CU
	22BMS-IMC-CT058 Simulation of surges associated with tropical cyclones along the coast of Bangladesh Md. Zakir Hossain, RU
	22BMS-IMC-CT075 Tropical Cyclone activity analysis under present and future climate condition along the Bay of Bengal Mst. Rabiba Khatun, IU
12:10 – 2:00 PM	Prayer and Lunch Break
2:00 – 3:30 PM	Technical Session – VIA Dynamical Systems
Zoom Link	https://bdren.zoom.us/j/6205939750?pwd=WVplbkUvNmIvRGwvT3dKUDlzVWMxQT09 Meeting ID: 620 593 9750 Password: 111222
Session Chair	Professor Dr. Md. Ashabul Haque, RU
Session Co-Chair	Professor Dr. Rehana Nasrin, BUET
Invited Talk	22BMS-IMC-IT016



2:00PM – 2:25PM	Professor Dr. Md. Ali Akbar Department of Applied Mathematics, Rajshahi University TBA
Contributory Talks 2:25PM – 3:30PM	22BMS-IMC-CT021 An Ideal Solution of Cubic Duffing Oscillator by Modified Mickens Extended Iteration Procedure M. M. Ayub Hossain, KUET
	22BMS-IMC-CT027 The role of the Poincaré map in the analysis of genetic network Pabel Shahrear, SUST
	22BMS-IMC-CT045 Bifurcations and chaos in a discrete fractional order model with Caputo and conformable fractional derivative Sarker Md. Sohel Rana, DU
	22BMS-IMC-CT046 Backward Bifurcation Phenomena of Dengue Transmission in the Presence of Re-Infection Md. Mahfujur Rahman, DU
	22BMS-IMC-CT087 Different types of maps routes to chaos in bi-infinite symbol space with strong chaotic features Hena Rani Biswas, BU
2:00 – 3:30 PM	Technical Session – VIB Nonlinear Analysis
Zoom Link	https://bdren.zoom.us/j/63583019640?pwd=c0E1WDJKOUUpBOEwvM21uajhpakFjdz09 Meeting ID: 63583019640 Password: 496445
Session Chair	Professor Dr. Md. Aman Ullah, CU
Session Co-Chair	Dr. Abdullah Al Mamun, CoU
Invited Talk 2:00PM – 2:25PM	22BMS-IMC-IT017 Dr. Imran Anwar Department of Mathematics, Lahore University of Management Science, Pakistan Intrinsic Algebraic and Combinatorial criterion linked with Simplicial Complexes
Contributory Talks 2:25PM – 3:30PM	22BMS-IMC-CT020 Lump soliton solutions to an integrable (3+1)-dimensional Boussinesq equation and its dimensionally reduced equations M. Nuruzzaman, BSMRSTU
	22BMS-IMC-CT043 Solution of Higher Order Linear Boundary Value Problems using Differential Quadrature Method Shikha Saha, AIUB
	22BMS-IMC-CT081



	<p>Periodic Solutions of Impulsive differential equations and an approach to its application on Hopfield neural network Rezwana Razzaque Angana, DU</p> <p>22BMS-IMC-CT102 Structure Preserving Model Order Reduction using PDEG Method Md. Saiduzzaman, IUBAT</p> <p>22BMS-IMC-CT104 Generation of the State-space Model of Piezoelectric Tonpilz Transducer Kife Intasar Bin Iqbal, BUET</p>
2:00 – 3:30 PM	Technical Session – VIC Fuzzy Mathematics
Zoom Link	Meeting ID: 945 2347 0859 Password: jBP8KY
Session Chair	Professor Dr. Rashed Talukder, SUST
Session Co-Chair	Professor Md. Fazlul Hoque, PUST
<p>Invited Talk 2:00 – 2:25PM</p>	<p>22BMS-IMC-IT018 Professor Dr. Md. Sahadat Hossain Department of Mathematics, Rajshahi University Using Linguistic Variable in Fuzzy Logic</p>
<p>Contributory Talks 2:25PM – 3:30PM</p>	<p>22BMS-IMC-CT010 Optimizing the wash time of the washing machine using several types of fuzzy numbers Md. Azharul Islam, RU</p> <p>22BMS-IMC-CT047 New concepts on R_1 fuzzy soft topological spaces Ruhul Amin, BRU</p> <p>22BMS-IMC-CT062 Implementation of a novel fuzzy contrast intensifier with histogram equalization-based methods for image enhancement Hafizur Rahman, GU</p> <p>22BMS-IMC-CT071 Separation Axiom (Normal) on Fuzzy Bitopological Space Saikh Shahjahan Miah, MBSTU</p> <p>22BMS-IMC-CT083 On the Extensibility of Diophantine $D(-1)$-Pairs to Quadruples Mirela Jukić Bokun, Croatia</p>
3:40 – 4:30 PM	Keynote Session III
Zoom Link	<p>https://bdren.zoom.us/j/62744739104?pwd=dm02a0xnejFCeEtIN1p5cklGN1R2Zz09 Meeting ID: 627 4473 9104 Password: 111222</p>
Session Chair	Professor Dr. Sharif Ullah Mozumder, DU



Speaker	Professor Emeritus Jose Garrido Concordia University, Canada <i>Bridging epidemiological and actuarial models: the case of COVID-19</i>
4:30 – 5:30 PM Break	
5:30 – 7:00 PM	Technical Session - VIIA Algebra & Analysis
Zoom Link	Meeting ID: 932 7677 3947 Password: GM9St2
Session Chair	Professor Dr. Md. Sahadat Hossain, RU
Session Co-Chair	Dr. Ruhul Amin, BRU
Invited Talk 5:30PM – 5:55PM	22BMS-IMC-IT019 Dr. Supanut Chaidee Department of Mathematics Chiang Mai University, Thailand <i>Spherical Laguerre Voronoi Diagram as a Tool for Understanding the Natural Patterns on the Sphere</i>
Contributory Talks 5:55PM – 7:00PM	22BMS-IMC-CT039 <i>Geometrical Aspects of Multiresolution Analysis in Wavelet Theory</i> Md. Azmol Huda, KU
	22BMS-IMC-CT068 <i>Laplace Transform and its Importance</i> R. N. Yadav, Nepal
	22BMS-IMC-CT013 <i>Factors Influencing University Learners' Under performance in Mathematical Courses</i> Shobha Islam, DU
	22BMS-IMC-CT014 <i>Predictors of Learner Success in Higher Education Mathematics</i> Mili Saha, JnU
	22BMS-IMC-CT078 <i>Energy density from modified Brans-Dicke cosmology</i> Md. Farhad Hossain, AUST
5:30 – 7:00 PM Operations Research	
5:30 – 7:00 PM	Technical Session – VIIB Operations Research
Zoom Link	https://bdren.zoom.us/j/7586998 Zoom ID: 279 758 6998 Password: 8099085
Session Chair	Professor Dr. Ganesh Chandra Roy, CU
Session Co-Chair	Professor Dr. Aminur Rahman Khan, JU
Invited Talk 5:30 – 5:55PM	22BMS-IMC-IT020 Professor Dr. Tanka Nath Dhamala Department of Mathematics, Tribhuvan University, Nepal TBA
	22BMS-IMC-CT034



Contributory Talks 5:55PM – 7:00PM	SUDOKU: An Integer Linear Programming Problem Based on Graph Coloring Sidratul Muntaha, DU
	22BMS-IMC-CT050 Analyzing the Constraint Qualifications in Solving Nonlinear Programming Problems Mamun or Rashid, CU
	22BMS-IMC-CT077 A System to Optimize Fish Production in Aquaculture Md. Sohel, KU
	22BMS-IMC-CT084 Approaching a Linear Programming Model for Production Planning of a Ready-Made Garments industry Sayma Suraiya, DIU
	22BMS-IMC-CT095 Numerical Approximations of a Nonlinear Volatility Model with European Options Jakobin Alam Khan, AUST
5:30 – 7:00 PM	Technical Session – VIIC Mathematical Biology
Zoom Link	Meeting ID: 3282785373 No Password required.
Session Chair	Professor Dr. Chandra Nath Podder, DU
Session Co-Chair	Professor Dr. Pabel Shahrear, SUST
Invited Talk 5:30PM – 5:55PM	22BMS-IMC-IT021 Professor Dr. Md. Haider Ali Biswas Mathematics Discipline, Khulna University Dynamic Optimization for Optimal Treatment Strategy of Leukemia Cancer by Engineered T-cell Therapy
Contributory Talks 5:55PM – 7:00PM	22BMS-IMC-CT052 SARS-CoV-2 and Rohingya Refugee Camp, Bangladesh: Uncertainty and How the Government Took Over the Situation Md. Shahrear Mahmud, SUB
	22BMS-IMC-CT067 Mathematical model of COVID-19 transmission with vaccination and optimal vaccine allocation strategy with limited supply Md. Rafiul Islam, USA
	22BMS-IMC-CT100 Delay Differential Equation In BSEIR Epidemic Model Razuana Norin, DU
	22BMS-IMC-CT101 The Reaction Diffusion System: a significant tool for pattern formation in the nature Ariful Islam Arif, DU
	22BMS-IMC-CT103



	<i>Patterns appear in reaction-diffusion systems</i> K. Fahad Mia, JU
7:10 – 8:00 PM	Keynote Session IV
Zoom Link	https://bdren.zoom.us/j/2912593662?pwd=VVpTMlZMUlk0WmhnYU1kNTJ2MHlmdz09 Meeting ID: 2912593662 Password: 123456
Session Chair	Professor Dr. Md. Shahidul Islam, DU
Speaker	Professor Dr. Michel Waldschmidt Sorbonne University, France <i>Lidstone interpolation in one and several variables</i>
8:00 – 8:30 PM	Concluding Ceremony
	<ul style="list-style-type: none">• <i>Conference Report</i> Professor Dr. Md. Shahidul Islam Vice President, Bangladesh Mathematical Society• <i>Feelings shared by presenters</i>• <i>Announcement of Best Presenters</i> Professor Dr. Md. Haider Ali Biswas Chair, TPC, 22nd Int'l Math. Conference• <i>Address by the Chief Guest</i> Professor Dr. A. S. M. Maksud Kamal Honorable Pro-Vice Chancellor (Academic) University of Dhaka• <i>Vote of Thanks</i> Professor Dr. Md. Showkat Ali Secretary, Bangladesh Mathematical Society• <i>Closing Address</i> Professor Dr. Nurul Alam Khan President, Bangladesh Mathematical Society