

Projects funds sanctioned during the year: 02

Principal Investigator	Title of the Project	Funding Agency	Amount and Duration
Dr. Gaurav Dwivedi	A Study of Polyharmonic boundary value problems with exponential nonlinearities	BITS Pilani	Rs. 200000 2018-2019
Dr. Sumanta Pasari (Indian-side PI)	Seismic Hazard Assessment of Indian Himalayan Arc by Geodetic and Seismological Data	Ministry of Education, Taiwan	NTD 200000 (~Rs. 450000) (one year; 2018)
Dr. Shivi Agarwal, Dr. Trilok Mathur (Co-PI)	A Benchmark Analysis of Public Transport Sector of Rajasthan: DEA Approach	DST, Rajasthan	Rs. 559000 2018-2010

C1. Publications in international/National refereed journals

S.No.	Authors	Title of the Publication	Details of the Journal	National/ International	Year
1.	Dubey B., Agarwal S, and Kumar A.	Optimal harvesting policy of a prey–predator model with Crowley–Martin-type functional response and stage structure in the predator	Nonlinear Analysis: Modelling and Control, 23(4): 493-514	International	2018
2.	Dubey P., Dubey U. S. and Dubey B.,	Modeling the Role of Acquired Immune Response and Antiretroviral Therapy in the Dynamics of HIV Infection	Mathematics and Computers in Simulation, 144:120-137	International	2018
3.	Kumar D.	A collocation scheme for singular boundary value problems arising in physiology	Neural Parallel and Scientific Computing, 26(1), 95-118	International	2018
4.	Kumar D.	A collocation method for singularly perturbed differential-difference turning point problems exhibiting boundary/interior layers	Journal of Difference Equations and Applications, 24(12), 1847–1870	International	2018
5.	Kumar D.	An implicit scheme for singularly perturbed parabolic problem with retarded terms arising in computational neuroscience,	Numerical Methods for Partial Differential Equations,34(6),1933-1952	International	2018
6.	Kumar D.	A parameter-uniform method for singularly perturbed turning point problems exhibiting interior or twin boundary layers	International Journal of Computer Mathematics, https://doi.org/10.1080/00207160.2018.1458098 .	International	2018
7.	Kumar D., Kumari P.	A parameter-uniform numerical scheme for the parabolic singularly perturbed initial boundary value problems with large time delay	Journal of Applied Mathematics and Computing, https://doi.org/10.1007/s12199	International	2018
8.	East J., Kumar J., Mitchell J.D., Wilson W	Maximal subsemigroups of finite transformation and diagram monoids	Journal of Algebra, 504, 176-216	International	2018
9.	Ozgur A., Nihan K., Kumar S., Nunes R.C., Sami M.	Cosmological implications of scale-independent energy-momentum squared gravity: Pseudo nonminimal interactions in dark matter and relativistic relics	Phys. Rev. D, 98, 063522	International	2018
10.	Kumar S., Nunes R.C., Yadav S.K.	Cosmological bounds on dark matter-photon coupling	Phys. Rev. D, 98, 043521	International	2018
11.	Ozgur A., Nihan K., Kumar S.,	Cosmic acceleration in a dust only Universe via energy-momentum powered gravity	Phys. Rev. D, 97, 024011	International	2018

S.No.	Authors	Title of the Publication	Details of the Journal	National/ International	Year
12.	Pasari S.	Nowcasting earthquakes in the Bay-of-Bengal Region	Pure and Applied Geophysics (in print)	International	2018
13.	Tiwari A, Narayan AB, Dwivedi R, Swadeshi A, Pasari S, Dikshit O	Geodetic investigation of landslides and land subsidence: case study of the Bhurkunda coal mines and the Sirobagarh landslide	Survey Review (in print)	International	2018
14.	Pasari S.	Stochastic modeling of earthquake interoccurrence times in northwest Himalaya and adjoining regions	Geomatics, Natural Hazards and Risk 9(1): 568–588	International	2018
15.	Pasari S, Dikshit O	Stochastic earthquake interevent time modeling from exponentiated Weibull distributions	Natural Hazards 90(2): 823–842	International	2018
16.	Choudhary V, Rakhee, Routroy S	State-of-the-art literature review on inventory models for perishable products	Journal of Advances in Management Research	International	2018
17.	Sharma S, Maiti D K, Alam M M, Sharma B K	Nanofluid (H ₂ O – Al ₂ O ₃ /CuO) flow over a heated square cylinder near a wall under the incident of Couette flow.	Journal of Mechanical Science and Technology, 32 (2), 659-670.	International	2018
18.	Tripathi, B., Sharma B K:	Influence of heat and mass transfer on two-phase blood flow with joule heating and variable viscosity in the presence of variable magnetic field.	International Journal of Computational Methods., doi.org/10.1142/S0219876218501396	International,	2018
19.	Tripathi, B., Sharma B K,	Effect of heat transfer on MHD blood flow through an inclined stenosed porous artery with variable viscosity and heat source	Romanian J. Biophys, 28(3), 89-102.	International,	2018
20.	Tripathi, B., Sharma B K,	Effect of variable viscosity on MHD inclined arterial blood flow with chemical reaction	Int. J. of Applied Mechanics and Engineering, 23(3), 767-785.	International,	2018
21.	Shekhawat K.,	Enumerating generic rectangular floor plans	Automation in Construction, 92: 151-165	International,	2018
22.	Shekhawat, K., Duarte, J.P.	Introduction to generic rectangular floor plans	Artificial Intelligence for Engineering Design, Analysis and Manufacturing, 32(3): 331-350	International,	2018
23.	Tiwari A., Yadav P.K., Singh P.	Stokes Flow Through Assemblage of Non-homogeneous Porous Cylindrical Particles Using Cell Model Technique	NASI Letters, 41(1), 53-57	International,	2018
24.	Yadav P.K., Tiwari A., Singh P.	Hydrodynamic permeability of a membrane built up by spheroidal particles covered by porous layer	Acta Mechanica, 229, 1869-1892	International	2018
25.	Tiwari A., Chauhan S.S.	Effect of Varying Viscosity on Two-Fluid Model of Blood Flow through Constricted Blood Vessels: A Comparative Study	Cardiovascular Engineering and Technology (accepted)	International	2018
26.	Yadav S., Pani A.K.	Superconvergence of a class of Expanded Discontinuous Galerkin Methods for Fully	J. Comput. Appl. Math., 333, 215-234.	International	2018

S.No.	Authors	Title of the Publication	Details of the Journal	National/ International	Year
		Nonlinear Elliptic Problems in Divergence Form			
27.	Yadav S., Pani A.K.	Superconvergent Discontinuous Galerkin Methods for Nonlinear Parabolic Initial and Boundary Value Problems	Journal of Numerical Mathematics (accepted)	International	2018

C2. Publications in the proceedings of international/national conferences:

- 1) Sharma Y., Pasari S., Dikshit O., and Ching K. E., GPS-Based Monitoring of Crustal Deformation in Garhwal-Kumaun Himalaya , Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-5, 451-454, 2018 (scopus)
- 2) Bhatia A., Pasari S. and Mehta A., Earthquake Forecasting Using Artificial Neural Networks, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-5, 823-827, 2018 (scopus)
- 3) Pasari S. and Mehta A., Nowcasting Earthquakes in the Northwest Himalaya and Surrounding Regions, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-5, 855-859, 2018 (scopus)
- 4) Rakhee, Jain M, Prioritized Call Admission Control for Cellular Mobile Network, in proceedings of National Conference in Applied Science and Humanities, held at Thakur College of Engineering and Technology, Mumbai, 23-24, Feb 2018.
- 5) Tripathi, B., Sharma, B K, Influence of heat and mass transfer on MHD two-phase blood flow with radiation, AIP Conference Proceedings, Vol. 1975, 030009:1-9, 2018.
- 6) Sharma B K, Sharma M, Gaur R K, Effect of chemical reaction on Jeffrey fluid model of blood flow through tapered artery with thermo-diffusion and diffuso-thermal gradients. Proceeding: Third Thermal and Fluids Engineering Conference, ASTFE Digital Library, Vol. 18, 1103-1115, 2018.