

## List of publications

### I. Papers in Referred Journals (List those published and accepted separately)

S.No.	Author(s)	Year	Title	Complete Reference of Journal
1.	<b>R.K. Upadhyay</b>	2009	Dynamics of an ecological model living on the Edge of Chaos.	Applied Mathematics and Computation Vol. 210, 455-464.
2.	<b>R. K. Upadhyay &amp; V.S. H. Rao</b>	2009	Short-term Recurrent Chaos and Role of Toxin Producing Phytoplankton (TPP) on Chaotic Dynamics in Aquatic Systems.	Chaos Solitons and Fractals Vol. 39, pp.1550-1564.
3.	<b>R.K. Upadhyay, Nitu Kumari &amp; Vikas Rai</b>	2009	Wave of chaos in a diffusive system: Generating realistic patterns of patchiness in plankton-fish dynamics.	Chaos Solitons and Fractals Vol. 40(1), 262-276.
4.	<b>R. K. Upadhyay &amp; Vikas Rai</b>	2009	Complex dynamics and Synchronization in Two non-identical Chaotic Ecological systems.	Chaos Solitons and Fractals Vol. 40, 2233-2241
5.	<b>R. K. Upadhyay, N. Bairagi, K. Kundu &amp; J. Chattopadhyay</b>	2008	Chaos in Eco-epidemiological problem of Salton Sea & its possible control.	Applied Mathematics and Computation Vol.196, pp. 392-401.
6.	<b>R.K. Upadhyay, Nitu Kumari &amp; V. Sree Hari Rao</b>	2008	Modeling the spread of Bird flu and predicting outbreak diversity.	Nonlinear Analysis: Real world Applications Vol. 9(4), pp. 1638-1648.
7.	<b>R.K. Upadhyay, Nitu Kumari &amp; Vikas Rai</b>	2008	Wave of chaos and Pattern Formation in Spatial Predator prey systems with Holling type IV predator response.	Mathematical modeling of Natural Phenomena Vol. 3(4), pp. 71-95.
8.	<b>R.K. Upadhyay</b>	2008	Chaotic dynamics in a three species aquatic population model with Holling type II functional response.	Nonlinear Analysis: Modelling and Control Vol. 13 (1), pp. 103-115.

9.	<b>R.K. Upadhyay,</b> A. Mukhopadhyay & S.R.K. Iyengar	2007	Influence of Environmental noise on the dynamics of a realistic Ecological model.	Fluctuation and Noise Letters Vol. 7 (1), pp. L61-L77.
10.	<b>R. K. Upadhyay,</b> R.K. Naji & Nitu Kumari	2007	Dynamical Complexity in some ecological models: effect of toxin production by phytoplankton.	Nonlinear Analysis: Modelling and Control Vol. 12 (1), pp. 123-138.
11.	Vikas Rai, Madhur Anand & <b>R.K. Upadhyay</b>	2007	Trophic structure and dynamical complexity in simple ecological model.	Ecological Complexity Vol. 4, pp. 212-222.
12.	<b>R. K. Upadhyay &amp;</b> S.R.K. Iyengar	2006	Extinction and Coexistence of competing prey species in Ecological systems.	Journal of computational methods in Science and Engineering Vol. 6, pp. 131-150.
13.	V. Rai & <b>R.K. Upadhyay</b>	2006	Evolving to the edge of Chaos: Chance or Necessity?	Chaos, Solitons and Fractals Vol.30(5), pp.1074-1087.
14.	Ram Naresh, Shyam Sunder & <b>R. K. Upadhyay</b>	2006	Modelling the removal of primary and secondary air pollutants by precipitation.	International Journal of Nonlinear Sciences and Numerical Simulations Vol. 7(3), pp. 285-294.
15.	<b>R.K. Upadhyay &amp;</b> J. Chattopadhyay	2005	Chaos to order: Role of toxin producing phytoplankton in aquatic systems.	Nonlinear Analysis: Modelling and Control Vol. 10(4), pp. 383-396.
16.	<b>R.K. Upadhyay &amp;</b> S.R.K. Iyengar	2005	Effect of seasonality on the dynamics of 2 and 3 species prey-predator systems.	Nonlinear Analysis: Real world Applications Vol. 6 (3), pp. 509-530.
17.	Vikas Rai & <b>R.K. Upadhyay</b>	2004	Chaotic population dynamics & Biology of the top- predator.	Chaos Solitons and Fractals Vol. 21, pp. 1195-1204.
18.	B. Dubey & <b>R.K. Upadhyay</b>	2004	Persistence and Extinction of one prey and two predators	Nonlinear Analysis: Modelling and Control Vol. 9(4), pp. 307-329.

			system.	
19.	<b>R.K. Upadhyay</b>	2003	Multiple attractors and Crisis route to chaos in a model food- chain.	Chaos Solitons and Fractals Vol. 16, pp. 737-747.
20.	B. Dubey, <b>R.K. Upadhyay</b> & J. Hussain	2003	Effect of Industrialization & pollution on resource biomass: A Mathematical Model.	Ecological Modelling Vol.167 (1-2), pp. 83-95.
21.	<b>R. K. Upadhyay</b> & S. Dey	2002	Advances in Mathematical, Statistical & Computational methods in Science & Technology.	Current Science Vol. 82(11), pp. 1313-1314
22.	<b>R.K. Upadhyay</b> & V. Rai	2001	Crisis-limited Chaotic Dynamics in Ecological systems.	Chaos Solitons and Fractals.(Chaos in Ecology) Vol. 12, pp. 205-218.
23.	<b>R.K. Upadhyay</b> , S.R.K. Iyengar & V. Rai	2001	Species Extinction Problem: Genetic Vs Ecological factors.	Applied Mathematical Modelling Vol. 25, pp. 937-951.
24.	<b>R.K. Upadhyay</b>	2000	Chaotic behavior of population dynamic systems in ecology.	Mathematical and Computer Modelling Vol. 32, pp. 1005-1015.
25.	<b>R.K. Upadhyay</b> , V. Rai & S.R.K. Iyengar	2000	How do Ecosystem respond to external perturbations?	Chaos Solitons and Fractals Vol. 11, pp.1963-1982.
26.	<b>R.K. Upadhyay</b> , V. Rai & S.R.K. Iyengar	2000	Stability and Complexity in Ecological Systems.	Chaos Solitons and Fractals Vol. 11, pp. 533-542.
27.	Dheeraj Bhardwaj & <b>R.K. Upadhyay</b>	1999	Group Theoretic Method for Converging Shock Wave Problem.	Applied Mathematics Letters Vol. 12, pp. 1276-1286.
28.	<b>R.K. Upadhyay</b> , S.R.K. Iyengar & V. Rai	1998	Chaos: An ecological Reality?	International Journal of Bifurcation and Chaos Vol. 8(6), pp. 1325-1333.

29.	<b>R.K. Upadhyay</b> & V. Rai	1997	Why Chaos is rarely observed in natural Populations?	Chaos Solitons and Fractals Vol. 8(12), pp. 1933-1939.
<b>List of Papers Accepted for publication in International Journals</b>				
30.	R.K. Naji, <b>R. K. Upadhyay</b> & Vikas Rai	2009	Dynamical consequences of predator interference in a tri-trophic population model.	Nonlinear Analysis: real world Applications {Article in Press}
31.	<b>R.K. Upadhyay</b>	2009	Observability of chaos and cycles in ecological systems: lessons from predator-prey models.	International Journal of Bifurcation and Chaos (in Tutorial-review section) To be publish in Vol. 19, No.10, October, 2009
32.	<b>R.K. Upadhyay</b> , Nitu Kumari & Vikas Rai	2009	Exploring dynamical complexity in diffusive driven predator-prey systems: Effect of toxin production by phytoplankton and spatial heterogeneities.	Chaos Solitons and Fractals (doi:10.1016/j.chaos.2009.01.027)
33.	Balram Dubey, Nitu Kumari & <b>R.K. Upadhyay</b>	2009	Spatiotemporal pattern formation in a diffusive predator-prey system: An analytical Approach	Journal of Applied Mathematics and Computing (DOI 10.1007/s12190-008-0221-6)
34.	<b>R.K. Upadhyay</b> & R.K. Naji	2009	Dynamics of a three species food chain model with Crowley-Martin type functional response	Chaos Solitons and Fractals [DOI 10.1016/j.chaos.2009.03.020].
35.	<b>R.K. Upadhyay</b> , Nitu Kumari & Vikas Rai	2009	Wave phenomena and Edge of chaos in a predator-prey system under Allee effect.	Differential Equation and Dynamical Systems. (Accepted)

## II. Papers published in Conference Proceedings

S.No.	Author(s)	Year	Title	Name and Place of Conference
36.	<b>R. K. Upadhyay</b>	2007	Chaotic dynamics in a tri-trophic mutual interference aquatic population model.	International Conference on Computational and Mathematical Methods in Science and Engineering, Illinois Institute of Technology Chicago, Illinois, USA. pp. 383-396.
37.	V. Rai, V & <b>R. K. Upadhyay</b>	2006	Ecological models with edge of Chaos.	International Conference on Mathematical Biology, IIT Kanpur pp. 273-277.
38.	B. Dubey & <b>R.K. Upadhyay</b>	2006	A model for the effect of predation on two competing prey species.	International Conference on Mathematical Biology, IIT Kanpur pp. 242- 250.
39.	<b>R.K. Upadhyay</b> & V. Rai	2004	Realizing Ecological Systems.	Mathematics and Information Theory: Recent topics & Applications. NSIT, New Delhi. pp. 208- 217.
40.	<b>R.K. Upadhyay</b>	2003	Dynamics of Noised –induced ecological systems.	Advances in Mathematical, Statistical & Computational methods in Science and Engineering, ISM Dhanbad. pp. 287-298.
41.	<b>R.K. Upadhyay,</b> V. Rai & S.R.K. Iyengar	2001	Chaos Vs Stability in seasonally perturbed predator-prey systems.	International conference on Mathematical modelling, Deptt. Of

				Mathematics, University of Roorkee, Roorkee. pp. 605-610.
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### III. Papers Presented in Conferences but Not Published

S.No.	Author(s)	Year	Title	
1.	<b>R.K. Upadhyay</b>	2004	Chaotic attractor in crisis in model ecological systems	International conference on Nonlinear Phenomena, Deptt. Of Mathematics, IISc Bangalore

### IV. Papers Communicated for publications

S.No.	Author(s)	Year	Title	
1.	<b>R.K. Upadhyay</b> , Nitu Kumari & Vikas Rai	2009	Modelling spatiotemporal dynamics of Vole population in Europe and America.	<i>Journal of Mathematical Biosciences</i>
2.	<b>R.K. Upadhyay</b> , Nilesh Kumar Thakur	2009	Nonlinear nonequilibrium pattern formation in a spatial aquatic system: Effect of fish predation.	<i>Journal of Biological Systems.</i>