Curriculum Vitae

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Education :

- B. Sc.(Chemistry Hons, 1st Class), Calcutta University, 2000.
- M. Sc.(Physical Chemistry, 1st class), Calcutta University, 2002.
- Ph. D.(Science), Jadavpur University, 2008 (at IACS under the supervision of Prof D. S. Ray

Designation :
Assistant Professor,
Department of Chemistry,

Research and Work Experience :

- Research Fellow (October, 2002 - February 2007)
  Department of Physical Chemistry
  Indian Association for the Cultivation of Science,
  Jadavpur, Kolkata 700 032, India.
  (with Prof. Deb Shankar Ray)

- Post-doctoral Researcher,
  Department of Physiology,
  McGill University
  (with Prof. Michael C. Mackey, 2009-2010)

- Post-doctoral Researcher,
  Earth and life Institute,
  Universite Catholique de Louvain
  (with Prof. Emmanuel Hanert, 2013-2014)

Disciplines of research experiences:

Nonlinear dynamics of biological and chemical systems (with special emphasis on phenomena in reaction-diffusion system).

Current Research Interest:

- Mathematical modeling of biological phenomenon
- Spatial and temporal periodicity in reaction diffusion system,
- Stochastic simulation of biological systems,

List of Publications :

1. Mobility induced instability and pattern formation in a reaction- diffusion system. **S. S. Riaz**,
S. Kar and D. S. Ray, Journal of Chemical Physics, 121, No- 11, 5395(2004).

2. Differential flow induced transition of Hopf instability to Turing instability and pattern f
ormation **S. S. Riaz**, S. Kar and D. S. Ray, Physica D, 203, 224, 2005.

3. Pattern formation induced by additive noise : a moment based analysis, **S. S. Riaz**, S. Kar, S. Dutta , D. S. Ray, Euro. Phys. J. B 47, 255(2005).

4. Pattern formation in reaction-diffusion system in crossed electric and magnetic fields, **S. S. Riaz**, S. Banarjee, S. Kar and D. S. Ray, Euro. Phys. J. B 53, 509(2006).

5. Spiral pattern formation in chlorite-iodide-malonic acid system: A theoretical and numerical study, **S. S. Riaz** and D. S. Ray, J. Chem. Phys 123, 1(2005)

6. Instability and pattern formation in reaction diffusion system : a higher order analysis., **S. S. Riaz,** S. Banarjee, S. Kar and D. S. Ray, Euro. Phys. J.B 53, 509(2006)

7. Noise-induced instability: An approach based on higher order moments, S. Dutta , **S. S. Riaz** and D. S. Ray, Phys. Rev. E 71, 036216(2005).

8. Diffusion and mobility driven instabilities in a reaction-diffusion system, S. S. Riaz and D. S. Ray, Indian J. Phys81(11), 1177(2007).

9. Temperature dependence and temperature compensation of kinetics of chemical oscillation : Belusov-Zhabotinskii reaction, glycolysis and circadian rhythms, S. Sen, **S. S. Riaz** and D. S. Ray, J. Theo. Bio., 2501, 103(2008).

10. Growth and decay of large fluctuations far from equilibrium, S. Sen, **S. S. Riaz** and D. S. Ray (Accepted in J. of Chemical Science, 2009)

11. Galerkin analysis of light-induced patterns in the chlorine dioxide–iodine–malonic acid
reaction-diffusion system. P. Ghosh, S Sen, **S. S. Riaz**, and D. S. Ray, Phys Rev E, **79**, 056216 (2009).

12. Time-delay-induced instabilities in reaction-diffusion systems, S. Sen, P. Ghosh, **S. S. Riaz** and Deb Shankar Ray, Phys. Rev. E 80, 046212 (2009)

13. Spatial periodicity induced by a chemical wave train, S. Sen, P. Ghosh, **S. S. Riaz** and Deb Shankar Ray, Physical review. E, Statistical, nonlinear, and soft matter physics 2010;81(1 Pt 2):017101.

14. Controlling birhythmicity in a self-sustained oscillator by time delayed feedback . P.Ghosh, S. Sen, **S. S.Riaz** and Deb Shankar Ray, Physical review. E, Statistical, nonlinear, and soft matter physics 2011; 83(3 Pt 2):036205.

15. Dynamic pattern formation in sea urchin embryo, **S. S. Riaz**, Michael C. Mackey, Riaz, S.S. & Mackey, M.C. J. Math. Biol. (2014) 68: 581.

16. Spatiotemporal instability in a diffusively relaxed dynamics, S. S. Riaz, Physical Review E 98(3) **,**032218,

17. Spatio-temporal instability in a delayed one species reaction-diffusion model, **S. S. Riaz** (manuscript submitted to Internation Journal of Nonlinear Dynamics)

(*Citation of paper h-index may be found in* https://scholar.google.co.in/citations?user=7-aM-OIAAAAJ&hl=en)