



# University College of Technology(A), Osmania University



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Specialization : Nonlinear, Fuzzy Logic & Neural Networks Control Systems



## Educational Qualifications:

S.No	Course	Specialization	Uni./College	Year of Passing
1	B.E	Chemical Engineering	NIT Srinagar	1988
2	M.Tech	Chemical Engineering	IIT Madras	1990
3	Ph.D	Chemical Engineering	IIT Madras	1996

**Work Experience:** 19 yrs. -Teaching, Research & Consultancy.

## Research: Funding Projects:

S. No	Title of the Project	Funding Agency	Duration	Year	Grant In Lakhs	Principal Investigator
1.	Control of nonlinear Processes with input Multiplicities	AICTE, New Delhi	2001-05	4	9	Self
2.	Identification and Control of Nonlinear Processes with Input Multiplicities	OU-DST-PURSE	2011-14	3	5	Self

## Papers Published in International/National Journals:

### *National Journals*

1. J.S.N.Murthy, K.Venkat, **G.P.Reddy**, V.Ramesh Kumar, Prediction of Dynamic Thermal Response of a Gas-Solid Fluidized Bed, Indian Chemical Engineer, 48, 240-251, (2006).
2. **Reddy, G.P.** and M.Chidambaram, Model Reference nonlinear control of bioreactors with input multiplicities, Indian Chemical Engineer, Section –A, 39, No.4, pp.T98-T102, Oct. Dec.(1997).
3. Chidambaram, M and **G.P.Reddy**, Nonlinear IMC of systems with input multiplicities, Indian Journal of Chemical Technology, 2, 115-118 (1995).
4. Chidambaram, M and **G.P.Reddy**, Analysis of chemical reactors with input and output multiplicities, Journal of IETE, 41, No.5 &6 297-299 (1995)

### *International Journals:*

- 1) G.Prabhaker Reddy and K. Venktrami Reddy, Neural Network based NARMA L2 control of temperature of a shell and tube heat exchanger, Proc. Int. conference on advances in chemical engineering and Technology, ICACE TKMCE'14, Kollam, Kerala 691005 (109-114), Elsevier Publications (2014).
- 2) Prabhaker Reddy Ginuga, and Radha Krishna Poondla, A Stable Control of a CSTR with Input Multiplicities using Artificial Neural Network Based NARMA-L2. Communications in Control Science and Engineering (CCSE)'. pp 72-77, (2014).
- 3) Ginuga Prabhaker Reddy, G.Radhika and K.Anil, Control of continuous stirred tank Reactor using Artificial Neural Networks based Predictive Control, Advanced Material Research, Vol 550-553, pp.2908-2912, (2012).
- 4) G. Prabhaker Reddy and B. C. Eranna, Near optimal Control of Bioreactor with Input Multiplicities by Fuzzy Logic Method, Journal of Artificial Intelligence: Theory and Application, 1, pp 48-53 (2010)
- 5) S.V.Sunil Kumar, V.Ramesh Kumar and **G.Prabhaker Reddy**, Nonlinear control of bioreactors with input multiplicities-an experimental work, Bioprocess and Bio systems Engineering, 28, 45-53, (2005).
- 7) Reddy, G.P. and M.Chidambaram, Model Based control of nonlinear systems with input multiplicity, Hungarian Journal of Industrial Chemistry, 27, 81-84 (1999).
- 8) Chidambaram, M and **G.P.Reddy**, Nonlinear control of systems with input and output multiplicities, Computers and Chemical Engineering, 20, 29-299 (1996).
- 9) Chidambaram, M and **G.P.Reddy**, Nonlinear control of systems with input multiplicities, Computers and Chemical Engineering, 19, 249-252 (1995).
- 10) **Reddy, G.P.** and M.Chidambaram, Nonlinear control of bioreactors with input multiplicities in Dilution rate, Bioprocess Engineering, 12, 151-155 (1995).
- 11) **Reddy, G.P.** and M.Chidambaram, Near-optimal productivity control of continuous bioreactors, IEE- Control Theory Applic. ,142, o.6, 633-637(1995).
- 12) **Reddy, G.P.** and M.Chidambaram, Nonlinear control of bioreactors with input multiplicities, Bioprocess Engineering, 11, 97-100 (1994).

- 13) **Reddy, G.P.** and M.Chidambaram, Control of nonlinear systems with input multiplicities, Hungarian Journal of Industrial Chemistry, 21, 239-242 (1993).

### Workshops/ Conferences/Seminars Attended:

#### National Conferences

- 1) G.Prabhaker Reddy and T.Srinivas, Studies on Dynamics and Control of a CSTR with input multiplicities using Aspen Dynamics, Paper (Poster) -628, CHEMCON-2011, Bangalore.
- 2) B. Madhava Narsihma and **G.Prabhaker Reddy**, Observer Design for Steam Super Heater Temperature Control of thermal power plants” Presented (Poster) at Chemical Engineering Congress (CHEMCON)-2006 held at Bharuch,Gujarath.
- 3).Shailaja and **G.Prabhaker Reddy**, Fuzzy logic control of drum boiler level in thermal power plants, Presented at Chemical Engineering Congress (CHEMCON)- 2005 held at New Delhi.
- 4). Siva Prasad , **G.P.Reddy** and V. Ramesh Kumar, Studies on Self-tuning controller of bioreactor with input multiplicities, Presented Chemical Engineering Congress(CHEMCON)-2003 held at Bhubaneshwar. (**Received Best paper Award** )

#### International Conferences:

- 1) G.Prabhaker Reddy, P. Radha Krishna and Ch. Swetha, A Stable Neural Networks based NARMA-L2 control of Bioreactor with input Multiplicities , IAENG – International. conference on Chemical Engineering, 2013 San Francisco, USA.
- 2) G. Prabhaker Reddy and B.C. Eranna, A stable direct inverse neural network control of continuous stirred tank reactor with input multiplicities, Proceedings of AIChE Annual Meeting, 2012 held during Oct. 28 – Nov.2,2012, Pittsburgh, USA.
- 3) Priti Cicili, G.P.Reddy and V.Ramesh Kumar, Dynamic Matrix Control of HDS Reactor, Proc. IMECS2009-International Multi conference of Engineers and computer Scientists 2009, 18-20, March 2009, Hong Kong, pp-1320-1325,Vol.II , ISBN: 978- 988-1701 2-7-5.
- 4). G.Prahaker Reddy, V.Ramesh Kumar and B.Spandana, Pseudo Dynamic Model Reference Nonlinear Control of a Continuous Bioreactor with Input Multiplicities,Proc.IMECS2009-International Multi conference of Engineers and Scientists 2009, 18-20,March 2009, Hong Kong, pp-1315-1319,Vol.II ISBN: 978-988-17012-7-5.
- 5). Anuradha, G.Prabhaker Reddy and J.S.N.Murthy, Direct Inverse Neural Network Control of a Continuous Stirred Tank Reactor (CSTR), Proc. IMECS2009- International Multi conference of Engineers and computer Scientists 2009, 18- 20, March 2009, Hong Kong, pp-1352-1356, Vol II, ISBN: 978-988-17012-7-.5
- 6).**Reddy, G.P.** and A.N.Raju, Nonlinear internal model control of continuous bioreactor with input multiplicities, The 27<sup>th</sup> IASTED international conference on Modeling, Identification and Control (MIC-2008) , February 11-13 2008,Innsbruck, Austria. Europe. ISBN Hardcopy:978-0-88986-711-6/ CD 978-0-88986-712-3.

### Workshops Organized:

S.No.	Name/Title	Date(s)	Responsibility
1	Academic Reforms in Chemical and its allied Engineering Courses under TEQIP-II	September 2012	Convener
2	Training program on Computer Fundamentals to Staff of the UCT.	3-13, July 2006	Coordinator
3.	Workshop on Design and analysis of experiments	2-3, March,2001	Member
4.	National seminar on wealth from waste	15 <sup>th</sup> April 2001	Member
5.	Indian Chemical Engineering Congress –CHECON-2002	December 2002	Member

#### ADMINISTRATIVE POSITIONS HELD IN THE UNIVERSITY:

S.No.	Position Held	Duration
1.	Director of Evaluation, Exam Cell,UCT, OU, Hyd	
2.	Chairman, BOS In Technology (A).	
3.	Member, Departmental Committee.	
4.	Adl. Chief Warden, Tech. Hostels.	
5.	Nodel Officer (Finance), Teqip-li	