

ACADEMIC PROFILE

1. Name : **Dr V. RAMESH KUMAR**
2. Father's Name : **V. DONGARUSA**
3. Date of Birth : **09th November, 1967**
4. Social status : **BC-B**
5. Designation : **Professor**
6. Department : **Technology**
University College of Technology, OU

7. Degrees obtained :

| University | Examination | Year | Subjects/ Specialization | Division |
|--------------------|-------------|------|---|--------------------|
| Osmania University | B.Tech | 1990 | Chemical Engineering | I with distinction |
| Osmania University | M.Tech | 1992 | Chemical Engineering (sp: Plant Design) | I |
| I.I.T., Madras | PhD | 1998 | Catalytic Hydrotreatment of Petroleum Fractions | |

8. **Employment Record** :

| University/College | Designation | Period |
|---|------------------------------------|------------------------|
| University College of Tech., Osmania University | Assistant Professor | 11.8.1997 to 10.8.2001 |
| University College of Tech., Osmania University | Assistant Professor (Senior scale) | 11.8.2001 to 10.8.2004 |
| University College of Tech., Osmania University | Associate Professor | 11.8.2004 to 10.8.2010 |
| University College of Tech., Osmania University | Professor | 11.8.2010 to till date |

9. **Teaching** :

(a) Classes taught

UG (B.Tech):
Process Modelling and Simulation
Computer Applications in Process Industries
Transport Phenomena
Process Dynamics & Control
Introduction to Chemical Engineering

Computer Languages

PG (M.Tech) Nonlinear Systems Analysis and Artificial Intelligent Control
Advanced Process Dynamics and Control
Mathematical Modelling and Design of Experiments
Computer Process Control
Process Flow Sheeting
Optimization Techniques

(b) Innovations/ contributions in Teaching :

i). Design of Curriculum :

Involved in restructuring and revision syllabus of following:

B.Tech. Courses

- **Computer Applications in Process Industries- both theory and practicals**
- **Transport Phenomena**
- **Computer Programming in C & C++ both theory and practicals**

M.Tech Course

- **Nonlinear systems and Artificial Intelligent Control (PDC specialization)**
- **Computer Process Control**
- **Advanced Process Dynamics and Control**
- **CFD practicals**
- **Advanced Simulation Practical**
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ii) Teaching Methods :

- **Followed regular class room teaching, ppts and encouraged students to interact and ask questions**

iii) Laboratory Experiments :

- **Identified the problems on which computer programs to be written in “Computer Application in Process Industries” Lab**
- **Involved in conduct of computer based experiments in Process Dynamics and Control (PDC) Laboratory course**
- **Involved in identification of CFD course problems**
- **Involved in identification of Advanced simulation course problems**

iv) Evaluation Methods :

- **Class Tests, Assignments and Slip tests.**

v) Preparation of resource material including books, reading materials, laboratory manuals etc.

- **Prepared the code for Computer Applications in Process Industries laboratory problems for B.Tech.IV/IV (Chem. Engg.& Food Technology)**
- **Involved in preparation Lab manual for CFD course**
- **Involved in preparation of Lab manual for Advanced simulation course**

vi) Remedial Teaching/ Student Counselling (Academic)

- **Helped students in clearing their doubts in problem solving & programming**

10. Consultancy and Sponsored Research Activities:

- (i) Co-investigator of AICTE project titled “ Control of nonlinear systems with input multiplicities’. Project grant : 9 lakhs, Duration : 4 years, Completed in year 2005

11 Publications:

International Journals :

- (i) V.Ramesh Kumar, K.S. Balaraman, V.S. Ramachandra Rao and M.S. Ananth, '*Modelling of Hydrotreating Process in a Trickle-bed Reactor*', Petroleum Science and Technology, Vol 15(3&4), 1997, pp 283-295.
- (ii) V.Ramesh Kumar, K.S. Balaraman, V.S. Ramachandra Rao and M.S. Ananth '*Performance study of certain commercial catalysts in hydrodesulfurization of diesel oils*', Petroleum Science and Technology, Vol. 19 (9&10), 2001, pp 1029-1038.
- (iii) S.V.Sunil Kumar, V.Ramesh Kumar and G.Prabhaker Reddy, '*Nonlinear control of bioreactors with input multiplicities – An Experimental work*', Bioprocess and Biosystems Engineering, 28, 1, 2005, pp 45-53.
- (iv) K. Anitha, T Shuwana T and V. R. Kumar "*Simulation of Atmospheric & Vacuum Crude Units Using Aspen Plus*", Petroleum Science and Technology, Vol 29(18), 2011, pp1885–1894.
- (v) Pavan Kumar Veldandi Ramesh Kumar V and Chintha Sailu '*Modeling and Simulation Studies of a Variable Speed Compressor*' International Journal of Engineering Research & Technology (IJERT) Vol. 4 Issue 11, November-2015 ISSN: 2278-0181
- (vi) Pavan Kumar Veldandi Ramesh Kumar V and Chintha Sailu '*Anti surge control design for variable speed controller using dynamic simulation*' International Journal of Applied Engineering Research Vol. 12 Issue 1, 2017 ISSN: 0973-4562
- (vii) P.K. Veldandi, V. Ramesh Kumar and Chintha Sailu '*Modeling and Simulation of Various Startup Scenarios of Compressors*', Recent Innovations in Chemical Engineering Vol 10 issue2, 2017, 139 - 144 ISSN 2405-5204
- (viii) M Kalyani, Gopal R Nemmani, V Ramesh Kumar, Suggala V Satyanarayana '*Simulation of a Catalytic Membrane Reactor for Oxidative Coupling of Methane—A Comparative Study for Isothermal and Non-isothermal Conditions*', International Journal of Engineering Technology Science and Research, IJETSR Volume 4, Issue 11 November 2017, ISSN 2394 – 3386
- (ix) M Kalyani, Bhadri Srinivas, V Ramesh Kumar and Suggala V Satyanarayana '*Oxidative Coupling of Methane in Membrane Reactor Reactor Simulation Studies and Multi Objective Optimization*', International Journal of Recent Technology and Engineering (IJRTE) Volume- 8, Issue-1, May 2019, pp1981-1988, ISSN: 2277-3878,

National Journals :

- (i) JSN Murthy, K Venkat, G P Reddy and V. Ramesh Kumar '*Studies on Dynamics of Heat Transfer in Fluidized Beds*' Indian Chemical Engineer, Vol 48, No. 4, Oct-Dec2006, pp 240-251.
- (ii) M Kalyani, V Ramesh Kumar and Suggala V Satyanarayana, '*On the Effect of Various Parameters on Oxidative Coupling of Methane*', Journal of Chemical Engineering and Research, Volume 2, Number 1 (2014), pp. 223-230

International Conferences :

- (i) V.Ramesh Kumar, K.S. Balaraman, V.S. Ramachandra Rao and M.S. Ananth, '*Studies on catalytic hydrotreatment of SR-HSDO and Diesel blend in a Trickle-bed Reactor*', Proceedings of International Conference on Advances in Chemical Engineering (ICACHE)-Madras1996, pp39-44.
- (ii) Reddy, G. Prabhaker, V.Ramesh Kumar, J.Suresh Kumar and Karra Srinivas, "*Fuzzy logic control of a bioreactor with input multiplicities*", Proceedings of International Conference on Chemical and Bioprocess Engineering, held during 27-29, August 2003, Malaysia.

- (iii) Priti Cicili, G.P. Reddy and V.Ramesh Kumar, "Dynamic Matrix Control for HDS Reactor", Proceedings of the International MultiConference of Engineers and Computer Scientists 2009 Vol II, IMECS 2009, March 18 - 20, 2009, Hong Kong, pp 1320-1325.
- (iv) G.Prabhaker Reddy, V. Ramesh Kumar and B.Spandana, "Pseudo Dynamic Model Reference Nonlinear Control of a Continuous Bioreactor with Input Multiplicities", Proceedings of the International MultiConference of Engineers and Computer Scientists 2009 Vol II, IMECS 2009, March 18 - 20, 2009, Hong Kong, pp 1315-1319.
- (v) K. Anitha and V.Ramesh Kumar, "Aspen Plus simulation of atmospheric and vacuum crude units", Proceedings of Int'l Symposium on Recent and Emerging Advances in Chemical Engineering, Dec 2-4, 2010 at IIT-Madras, pp 159-160.
- (vi) Chandra Shekar Besta, Anil Kumar Kastala, Prabhaker Reddy Ginuga, Ramesh Kumar Vadeghar, "MATLAB Interfacing: Real-time Implementation of a Fuzzy Logic Controller", 10th IFAC International Symposium on Dynamics and Control of Process Systems, Volume 46, Issue 32, December 2013, Pages 349-354
- (vii) Vigneswari, P Balaram, R Madhukar and V. Ramesh Kumar "Fuzzy logic control of Isothermal Continuous Fixed bed reactor using MATLAB", Int'l Conference on New Frontiers in Chemical, Energy and Environment Engineering (INCCEEE) held at NIT-Warangal, 20-21st March 2015
- (viii) RavichandKancharlaa*, Shanthi Karpurapu, Vadeghar Ramesh Kumar, Ginuga Prabhaker Reddy A Novel Approach for analysis of FTIR membrane spectroscopy IEEE 7th International Advance Computing Conference pp728-731 978-1-5090-1560-3/17
- (ix) Pavan Kumar Veldandi Ramesh Kumar V and Chintha Sailu A method for modelling variable speed compressor in chemical process simulators 2017 International Conference on Innovative Mechanisms for Industry Applications (ICIMIA) 21-23 Feb 2017 Electronic ISBN: 978-1-5090-5960-7
- (x) M Kalyani, Gopal R Nemmani, V Ramesh Kumar, Suggala V Satyanarayana Simulation of a Catalytic Membrane Reactor for Oxidative Coupling of Methane—A Comparative Study for Isothermal and Non-isothermal Conditions, Conference Proceeding of 5th International Conference on Science, Technology & Management (ICSTM-2017) at The Institution of Engineers India, Visvesvaraya Bhavan, Hyderabad, Telangana, India held on 1st December 2017, ISBN: 978-93-87433-03-8

National Conferences :

- (i) V. Ramesh Kumar, S.S. Sridharan and V. Gopal Krishnan ' *Prediction of Binary VLE data at different pressures* ' Indian Chemical Engineering Congress (CHEMCON)-1993 held at Bombay.
- (ii) V. Ramesh Kumar, K.S. Balaraman, V.S. Ramachandra Rao and M.S. Ananth, ' *Modelling and Simulation of an Industrial Hydrotreater* ' Indian Chemical Engineering Congress (CHEMCON)-1995 held at Kalpakkam
- (iii) G.P. Reddy and V. Ramesh Kumar ' *Simulation of an adiabatic hydro-desulfurization reactor* ' Proceedings of. Indian Chemical Engineering Congress (CHEMCON)-2000 held at Calcutta.
- (iv) JSN Murthy, K Venkat, G P Reddy and V. Ramesh Kumar ' *Studies on Dynamics of Heat Transfer in Fluidized Beds* ' Indian Chemical Engineering Congress (CHEMCON) -2002 held at Hyderabad.
- (v) V.Ramesh Kumar, K.S. Balaraman, V.S. Ramachandra Rao ' *Hydrotreating of Diesel Oil using Commercial Co-Mo/Al₂O₃ Catalyst* ' Indian Chemical Engineering Congress (CHEMCON)-2002 held at Hyderabad.
- (vi) JSN Murthy, P.Aruna and V. Ramesh Kumar ' *Heat Transfer in Multicomponent Fluidization of Binary Mixtures* ' Catalyst ' Indian Chemical Engineering Congress (CHEMCON)-2003 held at Bhubaneswar

- (vii) G.Prabhaker Reddy, V. Ramesh Kumar and S. Siva Prasada Rao 'Studies on self tuning PID control of a continuous bioreactor with input multiplicities ' Indian Chemical Engineering Congress (CHEMCON)-2004 held at Bhubaneswar
- (viii) Divya Namuduri, A.Pavan Sai Kumar, G. Prabhakar Reddy and V. Ramesh Kumar, "Modelling and Simulation of a Fermenter – A Neural net Approach" Indian Chemical Engineering Congress (CHEMCON)-2004 held at Mumbai.
- (ix) Ch Chandra Shekar, G Yugandhar and V.Ramesh Kumar, "Application of Neural Networks for Dynamic Modelling of Chemical Process Systems", Indian Chemical Engineering Congress (CHEMCON)-2007 held at Kolkata.
- (x) B. Prabhu and V.Ramesh Kumar, " Application of Neural Networks for Dynamic Modelling of Chemical Process Systems", National Symposium on Advances in Chemical Engineering-2007, held at UCT, OU, Hyderabad
- (xi) P.Anusha and V.Ramesh Kumar 'Simulation Studies On Production Of Dimethyl Ether Using Aspen Plus ' Indian Chemical Engineering Congress (CHEMCON)-2011 held at M S Ramaiah Institute of Technology, Bangalore

Book

- (i) V. Ramesh Kumar, T. Bala Narsaiah and K. Ravichand "Computational Simulation Tools in Engineering", BS Publications, (2018), ISBN : 9789387593046

- 12. Membership of Scientific and professional societies : Life member, IChE, Kolkata
- 13 No. of PhD and M.Tech guided : PhD : - M.Tech - 15
Ongoing : PhD: - 5 M.Tech – 5
- 14. Awards & Recognition : Recognized as PhD supervisor by Faculty of Technology, Osmania University
- 15. Improvement of Professional Competence
a) Seminars, Conferences, Symposia, Work Shops Attended :

| SNo | Topic | Period | Organisation |
|-----|--|---|--|
| I | CHEMCON-2001 at Chennai | 19-22 December ,2001 | IChE |
| Ii | CHEMCON-2002 at Hyderabad | | IChE |
| Iii | CHEMCON-2003 at Bhubaneswar | 19-22 December ,2003 | IChE |
| Iv | Workshop on "Campus Wide Networking" | 1 st 2 nd September -2005 | Institute of Science & Technology, JNTU, Hyderabad |
| v | Participated in Workshop on "Use of Process Simulators" . | 28-30 April 2006 | Department of Chemical Engineering, National Institute of Technology, Warangal |
| vi | Participated in Seminar on Model Based Design of Emedded Control Systems using MATLAB & SIMULINK | 4 th September , 2006 | Taj Residency, Hyderabad |
| vii | Participated in Workshop on "Design and Modelling of Heterogeneous Chemical Reactors. | 22 nd & 23 rd | University College of Technology, |

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| | | September, 2006 | Osmania University, Hyderabad |
| viii | Participated in 5 th National Conference on Virtual Instrumentation In Engineering Education | 8 th November, 2006 | Taj Residency, Bangalore |
| ix | Participated in Workshop & Training programme on “Computational Fluid Dynamics” | 11-15 December, 2006 | C-DAC, Pune |
| x | Participated in Workshop on “Advances in Chemical Engineering” | 23 rd & 24 th Feb 2007 | Department of Chemical Engg, JNTU-Ananthapur |
| xi | Participated in National Symposium on Advances in Chemical Engineering | November 22-24, 2007 | University College of Technology, OU, Hyderabad -7 |
| xii | Participated in Work shop on “Application of Design of Experiments in Research & Process Development” | 17 & 18 th January, 2008 | University College of Technology, OU, Hyderabad -7 |
| xiii | Participated in thw workshop on “ Establishment of Centre’s of Excellence | 29-30 Nov. 2012 | AU college of Engg, Visakapatnam |
| xiv | Participated in the 2 nd World Summit on Accreditation | 8-10 th Aprl 2014 | National Board of Accreditation, New Delhi |
| xv | Participated in the Regional Workshop on Web based student faculty and staff satisfaction survey | 23 rd Sept 2014 | MS Ramaiah Institute of Technology, Bangaloru |

b) Participation in International Scientific Events:

| S.No. | Event | Place | Date(s) |
|-------|---|--|--------------------|
| i | Attended the Professional education course on “ Modelling and Simulation for Systems Engineering ” | DLPE, Georgia Institute of Technology, Atlanta, Georgia USA | 4-7 February, 2008 |
| ii | International Multi Conference of Engineers and Computer Scientists | HONG KONG | 18-20 March, 2009 |
| iii | Attended a short term Faculty Training Programme in Advanced Process Control | Department of Chemical Engg Universiti Teknologi Petronas MALAYSIA | 23-27 March, 2009 |

c) Training Programmes Attended (Summer/Winter Schools) :

| S.No. | Topic | Period | Institution |
|-------|--|--|-------------------------|
| i | ISTE winter school programme on “object oriented data base management sytems” | 29 th December, 1997 - 10 th January, 1998 | PSG College, Coimbatore |
| ii | AICTE-ISTE short term training programme on “Fuzzy logic and neural networks in chemical process automation” | 15 –27 th February, 1999 | KREC, Surathkal |

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|------|--|--|--|
| iii | 36 th Orientation course organized by Academic Staff College, Osmania University | 6 th July, 2001 to 3 rd August, 2001 | Academic Staff College, Osmania University |
| iv | AICTE-ISTE Short term course Short-term training programme (STTP) on ‘Comparison & Analysis of Conventional, Electrochemical and Biochemical Pathways of Chemical Processes’ | 17-29 November 2003 | Department of Chemical Engineering, Dr. M.G.R. Engineering College, Maduravoyal, Chennai – 600 095 |
| v | Participated in SERC school on ‘Analytical and numerical methods in modeling and simulation of Engg systems’ | Jan 12-16, 2004 | IIT, Madras |
| vi | AICTE-ISTE short term training programme on “Web Based Engineering Education : Tools and Content Generation” | 22 nd March-2 nd April, 2004 | NIT-Warangal |
| vii | Staff development programme “Technological Improvements in Plastics Processing and Testing | 9 th -20 th August 2010 | CIPET-Hyderabad |
| viii | Participated in FSIT Master Training Programme in Technical Skills (NASSCOM & SPFU) | 19-28 August 2013 | JNTU-CEH Hyd |
| ix | Participated in the Programme on “Managing Excellence in Academic, Institutions for Heads of Institution/Dept of TEQIP Institution | Sept 30 – Oct 04, 2013 | ASCI, Hyd |

16 Seminars, Conferences, Symposia, Work Shops Organized :

| S.No. | Name/ Title | Date(s) | Responsibility |
|-------|---|---|---------------------------------|
| i | Work shop on “Design and Analysis of Experiments” Held at at College of Technology, OU | 2-3 rd March, 2001 | Member, Organizing Committee |
| ii | National seminar on “Wealth from Waste held at ICT conducted by IChE, HRC | 15 th April 2001 | Member, Organizing Committee |
| iii | National Seminar on “Nuclear Materials and Seamless Pipe Products” held at NFC, Hyderabad conducted by IChE, HRC | 10 th September, 2005 | Member, Organizing Committee |
| iv | Training Programme on Computer Fundamentals held at University College of Technology, OU, Hyderabad -7. | 3 rd – 13 th July, 2006 | Coordinator |
| v | Work shop on Experiments in pharmaceutical Engg | 2010 | One of the Editor |
| vi | Workshop on “Academic Reforms in Chemical and its allied Engineering Courses” under TEQIP-II. | 7 th September, 2012 | Co-Convener |
| vii | Workshop on “Computer Solution of Process Model Equations “ | 11-13 th October , 2012 | Convener |
| viii | Workshop on Computer Solution Tools in Engineering Education and Academic Research | 27 th June, 2014 | Convener |
| ix | Training Programme on Comsol Software | 17-18 th July, 2014 | Coordinator |
| x | Analysis of course, Lab Project outcomes for PG NBA | 8 th December 2014 | coordinator |

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|------|---|--|---------------------|
| xi | Workshop on Quality Initiatives in Technical Education Institutions – Outcome Based Education . | 23rd - 28th Nov 2015 | Convener |
| xii | One Day Seminar on “Process Intensification Approaches in Chemical Engineering & Chemical Technology” | 23 rd March 2017 | Program coordinator |
| xiii | One Day Seminar on "Innovation, Instrumentation and Intensification in Processes" | 30 th March, 2017 | Convener |
| xiv | Five day FDP Programme on Academic English, Integral Personality Development and Research Methodology | 8 th - 12 th Feb2018 | Convener |

17. Participation in Corporate Life :

- **Lecures delivered**

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| Delivered a lecture on Material Balance Fundamentals in a workshop on Chemical Engineering Practices in Process Industries held during 27-29 April, 2006 at University College of Technology. |
| Delivered lectures on Process Modelling and Simulation and Optimization to Trainee Scientific Officers TSOs at BARC Training School, NFC Hyd from 21st- 28th Feb 2013 (10 lectures) |
| Delivered lectures on (i) Introduction to Mathematical Modelling (ii) Computer Solution of Model Equations on 2/12/2013 at UGC Academic Staff College, JNTU-H in a UGC sponsored Refresher course on ‘Mathematical Modelling and Simulation for Scientists and Engineers held during 2-21 Dec 2013 |
| Delivered lectures on Process Modelling and Simulation and Optimization to Trainee Scientific Officers TSOs at BARC Training School, NFC Hyd from 3rd- 8th Feb 2014 (10 lectures) |
| Resource person for Faculty development program on modeling, simulation and optimization of chemical processes held at Anurag group of institutions(autonomous) during 17-19 Nov 2016 |
| Guest of Honour for Inaugural function of National Seminar on “Recent Developments In In-Vivo Experimentation- A Practical Approach” on 8th and 9th of December 2017 organized by Gokaraju Rangaraju College of pharmacy Bachupally Hyderabad |
| Chief Guest for Valedictory (24.2.2018) of Two day national level conference Pharmavridhi-2k18 on Nanomedicines and Innovations in Pharma Industry organized by St.Pauls College of Pharmacy, Hyderabad on 24.2.2018 |

- Member , Departmental Committee of College 2003-06, 2012-15, 2016-till date
- Contributed to upgrade the computer lab facilities and this has facilitated to start lab for B.Tech. I/IV and B.Tech IV/IV, M.Tech I Year –I sem & II sem
- Involved in allotment of B.Tech. IV/IV Chem. Engg. Projects and conduct of seminars 2001-11
- Coordinator, IQAC at college 2006-12
- Member, Anti ragging committee of the college
- Common staff for conduct of all university and college examinations during 1997-2001 & 2003-05.
- Developed computer programs for tabulation and declaration of results of B.Tech and M.Tech examinations held during 2001-11
- General Warden, New & Main Technology Hostels during 2005-2008
- Mess Warden, Technology Hostel since 2008 to 2014
- Supervisor for enumeration work carried out in the 1st phase of Census-2011 held from 26th April to 10th June, 2010.
- Supervisor for enumeration work carried out in the 2nd phase of Census-2011 held from 9th to 28th February, 2011
- Special Observer UEI Global examination centre at Faridabad CDE examinations-2011
- Director of Evaluation, Examination Cell, UCT (A), OU since Jan-2012 to March 2013

- **Additional Controller of Examinations (EDP), Examination Branch, Osmania University March 2013- July 2016**
- **Chairman, Board of Studies in Chemical Engineering (A), UCT (A), OU from 2014-2016**
- **Chairman, Board of Studies in Bio Technology, OU from 2015- 2017**
- **Vice Principal, UCT, OU since Feb 2017**
- **Chairman, Board of Studies in Pharmacy, OU from Aug 2017**

Contact details :

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