

## **RAVI PRAKASH JAGADEESHAN**

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### **EDUCATION**

Jun. 1976–May 1981 **Indian Institute of Technology, Madras**  
**B.Tech, Chemical Engineering**

Aug. 1981–Jan. 1984 **University of Akron, Ohio, USA**  
**M.S, Chemical Engineering, Advisor: Prof. M. S. Willis**

Aug. 1984–Dec. 1989 **Indian Institute of Science, Bangalore**  
**PhD, Chemical Engineering, Advisor: Prof. K. Kesava Rao**

Jan. 2004–Dec. 2004 **Monash University, Melbourne, Australia**  
**Graduate Certificate in Higher Education**

### **PROFESSIONAL HISTORY**

Jan. 2013– **Monash University, Australia**  
**Professor, Department of Chemical Engineering**

Jan. 2006–Dec. 2012 **Monash University, Australia**  
**Reader, Department of Chemical Engineering**

Jan. 2001–Dec. 2005 **Monash University, Australia**  
**Senior lecturer, Department of Chemical Engineering**

Sep. 2000–Jan. 2001 **Indian Institute of Technology, Madras**  
**Associate Professor, Department of Chemical Engineering**

May 1999–Apr. 2000 **University of Kaiserslautern, Germany**  
**Alexander von Humboldt Research Fellow,**  
Department of Mathematics

Sep. 1995–Sep. 2000 **Indian Institute of Technology, Madras**  
**Assistant Professor, Department of Chemical Engineering**

Oct. 1994–Sep. 1995 **Indian Institute of Technology, Madras**  
**Visiting Faculty, Department of Chemical Engineering**

Oct. 1993–Sep. 1994 **Swiss Federal Institute of Technology, Zürich, Switzerland**  
**Research Associate, Polymer Physics Group**  
Advisor: Professor H. C. Öttinger

Oct. 1991–Sep. 1993 **University of Cambridge, United Kingdom**  
**Research Associate, Cavendish Laboratory**  
Advisor: Sir Sam Edwards

Jun. 1990–Sep. 1991 **National Chemical Laboratory, Pune, India**  
**Scientist C, Chemical Engineering Division**

Jan. 1990–May 1990 **National Chemical Laboratory, Pune, India**  
**Research Associate, Chemical Engineering Division**  
Advisor: Dr R. A. Mashelkar

## **VISITING APPOINTMENTS & SABBATICALS**

Jul. 2015–	<b>University of Warwick, UK</b> <b>Visiting Professor</b> , Department of Chemistry
Aug. 2018–Sep. 2018	<b>California Institute of Technology, USA</b> <b>Visiting Associate</b> , Department of Chemical Engineering
May. 2014–Jun. 2014	<b>Max Planck Institute for Polymer Research, Mainz, Germany</b> <b>CECAM Guest</b> hosted by the CECAM Node for Soft Matter and Statistical Mechanics ( <a href="http://cecamnodesmsm.mpip-mainz.mpg.de">http://cecamnodesmsm.mpip-mainz.mpg.de</a> )
Mar. 2014–Apr. 2014	<b>Massachusetts Institute of Technology, USA</b> Department of Mechanical Engineering
Jan. 2014–Feb. 2014	<b>Australian National University, Australia</b> <b>Visiting Fellow</b> , Research School of Chemistry & Research School of Physics & Engineering
Dec. 2006–Jan. 2007	<b>Rice University, USA</b> <b>Visiting Professor</b> , Department of Chemical Engineering
Nov. 2006	<b>Stanford University, USA</b> Department of Chemical Engineering
Jul. 2006–Aug. 2006	<b>Max Planck Institute for Polymer Research, Germany</b> <b>Alexander von Humboldt Research Fellow</b> , Theory Group
Nov. 1997–Dec. 1997	<b>Kavli Institute for Theoretical Physics, USA</b> Participant in research program on “Jamming and Rheology: Constrained Dynamics on Microscopic and Macroscopic Scales”

## **HONOURS, AWARDS, EDITORSHIP AND PROFESSIONAL MEMBERSHIPS**

- Professor N. R. Kuloor memorial gold medal for the best PhD thesis in the Department of Chemical Engineering, Indian Institute of Science, for the years 1990-1991.
- Alexander von Humboldt Fellow, Department of Mathematics, University of Kaiserslautern, Germany, 1999-2000.
- President of the Australian Society of Rheology, 2006 to 2008.
- Editor-in-Chief Korea-Australia Rheology Journal, published by Springer, 2008 - 2020
- Listed in Monash’s top 250 researchers in 2010.
- Member, Australian Association of Alexander von Humboldt Fellows
- Council member, Australian Society of Rheology.
- Member, The Society of Rheology, USA.
- Member, German Society of Rheology.
- Australian representative on the International Committee on Rheology, 2016 -
- Member of American Society of Rheology Bingham Medal Award Committee (2017-2019)
- Fellow of the Society of Rheology, USA, 2019
- Medallion of the Australian Society of Rheology, 2020
- Editorial Board member of the Journal of Rheology, March 2022-

## RESEARCH STUDENT SUPERVISION

Student	Degree	Status	Years of enrolment	Supervisor Role** **Primary (M), Joint (J), Associate (A)
<b>VARAKHEDKAR, Amit</b>	PhD	Current	0 (2022)	M (50%)
<b>KUMAR, Avishek</b>	PhD	Current	0.5	M (25%)
<b>MARIYA, Silpa</b>	PhD	Current	2.5	M (25%)
<b>PINCUS, Isaac</b>	PhD	Current	4	M (100%)
<b>SANTRA, Aritra</b>	PhD	Completed (2021)	4	M (100%)
<b>KUMARI, Kiran</b>	PhD	Completed (2021)	4.5	M (50%)
<b>KAILASHAM, Ramalingam</b>	PhD	Completed (2021)	4.5	M (50%)
<b>HODGES, Emma Kate</b>	PhD	Completed (2017)	5	J-Co (50%)
<b>CHANDI Sasmal</b>	PhD	Completed (2016)	3.5	M (75%)
<b>WANG, Jian Ke</b>	PhD	Completed (2014)	4	M (40%)
<b>JAIN, Aashish</b> <i>Recipient of the Finkel PhD Scholarship awarded by the Finkel Foundation.</i>	PhD	Completed (2013)	5	M (100%)
<b>GADKARI, Siddharth (IITB-M)</b>	PhD	Completed (2013)	4.5	M (30%)
<b>PAN, Sharadwata (IITB-M)</b> <i>Awarded 'Best PhD Thesis' in 2015, 'Best Collaboration' in 2014, and 'Best Seminar' in 2009 at the IIT-B Monash Research Academy.</i>	PhD	Completed (2014)	5.5	M (30%)
<b>TILVAWALA, Gopesh Chaitanyakumar</b>	Masters	Completed (2014)	2.5	A (25%)
<b>CHAKRABORTY, Debadi</b>	PhD	Completed (2011)	4	M (50%)
<b>PHAM, Tri Thanh</b>	PhD	Completed (2009)	4	M (75%)
<b>ACHARYA, Mohini Vaman</b>	Masters	Completed (2007)	2.5	J (50%)
<b>BAJAJ, Mohit</b>	PhD	Completed (2006)	4	M (90%)
<b>RANGANATHAN, Prabhakar</b> <i>Awarded the Kenneth Hunt and Mollie Holman Medals for the most outstanding PhD thesis of the year in the Engineering Faculty for 2005.</i>	PhD	Completed (2005)	4	M (90%)

## POST-DOCTORAL RESEARCH ADVISING

Post-doctoral Associates	Year	Topic
<b>Dr. Satheesh Kumar</b>	12/2001-11/2003	Universal Properties of Dilute Polymer Solutions
<b>Dr. P. Sunthar</b>	09/2002-02/2006	Dynamics of Dilute Solutions of DNA Molecules
<b>Dr. S. Pattanayek</b>	01/2006-12/2006	Dynamics of Polyelectrolyte Solutions
<b>Dr. M. Bajaj</b>	05/2006-01/2008	Complex Flows of Viscoelastic fluids
<b>Dr. J. Bosko</b>	01/2007-11/2008	Dynamics of Dendrimer Solutions
<b>Dr. A. Mehrotra</b>	04/2012-12/2013	Dynamics of Semidilute Polymer Solutions
<b>Dr. D. Robe</b>	06/2019-	Linking topology and rheology for designing supramolecular polymer networks

## RESEARCH FUNDING

Grant Scheme	Title	Applicants	Years	(\$'000)
Engineering Faculty Grants Scheme, Monash University	Rheological Properties of Dilute Polymer Solutions, Monash University	R. P. Jagadeeshan	2001	12
New Staff Member Research Fund, Monash University	The influence of solvent quality on the rheological behaviour of dilute polymer solutions in simple shear and elongational flows	R. P. Jagadeeshan	2001	15
Engineering Faculty Grants Scheme, Monash University	Stress Relaxation in Entangled Polymer Solutions after a Large Uniaxial Elongational Step Strain	R. P. Jagadeeshan	2002	12.5
New Staff Member Research Fund, Monash University	Unravelling the conformations of DNA molecules	R. P. Jagadeeshan	2002	15
Expertise Grant Scheme, VPAC	Universal Rheological Properties of Dilute Polymer Solutions	R. P. Jagadeeshan	2002	30
Monash Research Fund Postdoctoral Fellowships scheme, Monash University	Micro-Macro Computation of Viscoelastic Roll Coating Flows	R. P. Jagadeeshan & C. Tiu	2002-2003	99
Engineering Faculty Grants Scheme, Monash University	Modelling the Stress-Conformational Hysteresis in Uniaxial Extensional Flows of Dilute Polymer Solutions	R. P. Jagadeeshan	2003	15
New Staff Member Research Fund, Monash	The dynamics of protein folding	R. P. Jagadeeshan	2003	15

Expertise Grant Scheme, VPAC	Polymer Solution Rheology with a Realistic Meso-scale Polymer Model	R. P. Jagadeeshan	2003	30
Discovery, ARC	The flow properties of proteins and other biopolymers	T. Sridhar, & R. P. Jagadeeshan	2004 - 2006	365
Engineering Faculty Grants Scheme, Monash University	Understanding biopolymer-surface interactions	R. P. Jagadeeshan	2004	12
Engineering Faculty Grants Scheme, Monash University	Modelling The Coil-Stretch Transition In Extensional Flows Of Polymer Solutions	R. P. Jagadeeshan	2005	12
Engineering Faculty Grants Scheme, Monash University	Dynamics Of Interacting DNA And Single Wall Carbon Nanotubes	R. P. Jagadeeshan	2006	10.5
Chemical and Thermal Systems: Fluids and Hydraulics Program, National Science foundation, USA	Conformational Phase Transitions of Highly Flexible Polymers: Theory, Computer Simulation, and Single Molecule Experiments	E. S.G. Shaqfeh & R. P. Jagadeeshan	2005-2008	437
Linkage-International, ARC	DNA Dynamics in Shear and Extensional Flows: Simulation and Single Molecule Experiments	R. P. Jagadeeshan T. Sridhar & E. S. G. Shaqfeh	2005-2007	53
Discovery, ARC	Understanding the Behaviour of Single-Walled Carbon Nanotubes in Liquids	T. Sridhar, R. P. Jagadeeshan, M. Pasquali & E.S. G. Shaqfeh	2006-2008	270
ARC, Linkage Infrastructure Equipment and Facilities	Biomedical Engineering Sensing and Imaging Facility (total of 20 investigators)	T. Sridhar,...., R. P. Jagadeeshan	2006	1300
VPAC e-Research Program Grants Scheme	Computational study of coarse-graining in macromolecular dynamics	P. Daivis, B. Todd & R. P. Jagadeeshan	2007	24
Engineering Faculty Grants Scheme, Monash University,	Structure and Flow Properties of Polymeric Dendrimers	R. P. Jagadeeshan	2007	16
Engineering Faculty Grants Scheme, Monash University	Is the Electrostatic Blob Model Applicable To Dilute Polyelectrolyte Solutions Undergoing Shear Flow?	R. P. Jagadeeshan	2008	13

Monash-CSIRO Collaborative Research Support Scheme	Multi-scale Modeling of the Structure and Dynamics of Hyperbranched Molecules: Brownian and Molecular Dynamics	R. P. Jagadeeshan & R. J. Varley	2008	42.5
Engineering Faculty Grants Scheme, Monash University	Realistic Simulation of Haemodynamics and Haemorheology in the Microcirculation.	R. P. Jagadeeshan	2009	17
Engineering Faculty Grants Scheme, Monash University	Cytoadhesive dynamics of parasitized red blood cells.	R. P. Jagadeeshan	2010	20
Linkage, ARC	Nanotechnology Enabled Electrochemical Energy Storage Materials from Indigenous Natural Graphite	M. Majumder, R. P. Jagadeeshan & R. Singh	2011-2013	210
Discovery, ARC	Designing polymer additives to control breakup of jets and impacting drops	P. Ranganathan R. P. Jagadeeshan, D. Boger & G. McKinley	2012-2014	320
Monash-Warwick Alliance Seed Fund	From qualitative to quantitative analysis of flow linear dichroism	R. P. Jagadeeshan & A. Rodger	2014	37
Monash-Warwick Alliance Seed Fund	Hydrodynamics of semi-dilute matter	R. P. Jagadeeshan & R. Ball	2015-2016	7
Centre Europeen de Calcul Atomique et Moleculaire (CECAM)	Hydrodynamic Fluctuations in Soft-Matter Simulations	R. P. Jagadeeshan, B. Duenweg & F. Schmid	2015	30
Centre Europeen de Calcul Atomique et Moleculaire (CECAM)	Challenges in Multiphase Flows	R. P. Jagadeeshan, B. Duenweg & Ignacio Pagonabarraga	2018	39
Discovery, ARC	Linking topology and rheology for designing supramolecular polymer networks	R. P. Jagadeeshan, & G. McKinley	2019-2022	390
Centre Europeen de Calcul Atomique et Moleculaire (CECAM)	Flagship Workshop on Ring Polymer Dynamics	R. P. Jagadeeshan, B. Duenweg & Charles Schroeder	2021	34

#### RESOURCE SHARES AT MAJOR NATIONAL COMPUTATIONAL FACILITIES

Grant Scheme	Title	Applicants	Years	CPU Hours
Merit Allocation	Viscoelastic Flow	R. P. Jagadeeshan &	2002,	45000 (2002),

Scheme, Australian Partnership for Advanced Computing.	Computations using Finite Element and Smoothed Particle Hydrodynamics Techniques	J. Monaghan	2003	51,532 (2003)
Merit Allocation Scheme, Australian Partnership for Advanced Computing.	Prediction of the Rheological Properties of Dilute Polymer Solutions with Brownian Dynamics Simulations	T. Sridhar & R. P. Jagadeeshan	2002 - 2007	30000 (2002), 40000 (2003), 50000 (2004), 50000 (2005), 20000 (2006), 39000 (2007)
Merit Allocation Scheme, Australian Partnership for Advanced Computing & NCI.	The Mechanical Properties of Bio-Macromolecules	R. P. Jagadeeshan	2004 - 2019	50000 (2004), 60000 (2005), 44000 (2006), 97600 (2007), 100000 (2008), 150000 (2009), 120000 (2010), 60000 (2011), 164000 (2012), 94000 (2013), 400000 (2015), 250000 (2018), 426000 (2019)
Resource Allocation Scheme, Victorian Life Sciences Computation Initiative.	Cytoadhesive Dynamics of Parasitized Red Blood Cells	R. P. Jagadeeshan	2010 - 2015	50000 (2010), 660000 (2011), 660000 (2012), 1200000 (2013), 1200000 (2014), 150000 (2015)
Merit Allocation Scheme, Australian Partnership for Advanced Computing & NCI.	Sticky Polymers in Flow: Nexus Between Microscopic and Macroscopic Dynamics	R. P. Jagadeeshan	2020	250000
Merit Allocation Scheme, Australian Partnership for Advanced Computing & NCI.	Brownian Dynamics of Sticky Polymers	R. P. Jagadeeshan	2021, 2022	500000 (2021) 500000 (2022)

An in-kind value of \$0.50 per processor hour on compute systems has been recommended by the APAC board (up to 2007), and the NCI Steering Committee has recommended an in-kind value of \$0.10 per processor hour.

## ASSESSOR OF COMPETITIVE GRANTS

No	Funding body	Category of assessor	Number of applications assessed	Year
1	ARC Discovery	Oz Reader	1	2010
2	ARC Future fellow	Oz Reader	2	2010
3	Marsden Fund (Royal Society of New Zealand)	International Referee	1	2010
4	ARC Discovery	Oz Reader	4	2011
5	ARC Discovery	Oz Reader	4	2012
6	ARC Discovery	Oz Reader	1	2013
7	ARC Discovery	Oz Reader	2	2014
8	ARC Linkage	Oz Reader	1	2015
9	ARC Discovery	Oz Reader	1	2015
10	ARC DECRA	Oz Reader	3	2017
11	ARC Discovery	Oz Reader	1	2017
12	ARC DECRA	Oz Reader	1	2019
13	ARC Discovery	Oz Reader	1	2019
14	ARC DECRA	Oz Reader	1	2020
15	ARC Discovery	Oz Reader	1	2020

## TEACHING RESPONSIBILITIES (SINCE 2001)

Name (Subject code)	Credits	Enrolment	Involvement	Year
Chemical Engineering Computer Applications (CHE 3130)	4	40-65	70% lecturer with Dr P. Webley (2001); 80% lecturer with Dr P. Webley (2002); Sole lecturer 2003-	2001-5
Theory of Polymer Dynamics		5-10	Sole lecturer, Informal course of 25 lectures to post-graduate students	2001
Thermodynamics II (CHE3115 & CHE3161)	4	50-100	50% lecturer with Prof. Frank Lawson; (2002); Sole lecturer 2003-	2002-6
Chemical Engineering Research Project (CHE4118)	9	1-2	Supervisor to groups of students	2001-2, 2004-6
Fluid Mechanics (CHE2100, CHE2082)	4	150-300	25% lecturer with Profs. J. Sheridan (2002-2003) / R. Alfredson (2004-2006)	2002-6
Chemical Engineering Practice III (CHE3118)	4	40	Sole coordinator	2003
Modelling (CHE5171)	4	15	50% lecturer with Dr A. Hoadley; Distance Educat.	2004



Chemical Engineering Practice I (CHE2150)	4	65	Sole lecturer	2005
Chemical Engineering Research Project (CHE4180)	9	3	Supervisor to groups of students	2008
Chemistry and Chemical Engineering Thermodynamics (CHE3161)	6	100-130	Sole lecturer	2007-2010
Design Project (CHE4170)	12	100-130	Lecture on “Technology Evaluation”	2009-2019
Macromolecular Hydrodynamics (10.531/2.341)	H-credit	20-30	Post-graduate course, Guest lecturer at MIT, USA (20%) with Prof. Gareth McKinley	2014
<i>Particle Technology (CHE4162)</i>	6	100-140	50% lecturer with Prof. Wenlong Cheng 25% lecturer with Dr Joseph Ho and Dr Hassan Jubair, 50% lecturer with Dr Poorvarasi Balan	2012-2015  2021 -
Chemical engineering research project (CHE4180)	12	2-6	Supervisor to groups of students	2009-12, 2015 – 2021
<i>Final year project A (ENG4701)</i>	6	1-2	Supervisor to groups of students	2022 -
Fluid Mechanics (CHE2161)	6	100-300	33% lecturer with Mechanical Engineering (2007 S1 & S2, 2008 S1)	2007-8, 2011-13 (S1 & S2), 2014 (S2), 2015-2017 (S1 & S2)
Fluid Mechanics (CHE2161)	6	100-150	30% lecturer with Dr Parama Banerjee (70% in 2018 S1, 30 % in 2018 S2, 2019 S2, 75% in 2020)	2018 (S1 & S2) 2019 (S1) – 2020 (S2)
<i>Transport Phenomena and Numerical Methods (CHE4163, CHE3167)</i>	6	80-170	Sole lecturer until 2019. 50% with Dr Leonie van ‘t Haag in 2020, 40% in 2021, 20% in 2022	2008-2013, 2015 –
<i>Advanced Fluid Dynamics (CHE5112)</i>	6	5-15	30% lecturer with Dr Zongyan Zhou in 2020, sole lecturer in 2021	2020 –

#### DEPARTMENT AND MONASH UNIVERSITY SERVICE

1. Information Technology Strategy Committee, 2002-2004
2. Department Postgraduate committee, 2004-2005
3. Faculty Engineering Research Committee, 2004-2006
4. Faculty Academic Progress and Exclusions Committee for undergraduate students
5. Review Panel member, Intelligent Robotics Research Centre, November 2004
6. Department Seminar co-ordinator, 2004-2006
7. Department Examinations Officer, 2007-2012
8. Faculty Outside Study Program (OSP) Committee, 2007-2014

9. Department Research and Training committee, 2012
10. Department Deputy Director of Research (Alternate on Engineering Research Committee), 2012-2015
11. Department Deputy Director of Teaching, 2015-2017
12. Department Milestone Panel Chair, 2016-
13. Department Platinum Seminar co-ordinator, 2016-
14. Department Course Director for the “Professional Master of Engineering” degree, 2019-

#### **INVITED, KEYNOTE AND PLENARY LECTURES (Since 2007)**

1. Invited speaker in the Advanced Processing and Forming of Soft Matter session at the virtual Complex Fluids-2020 held online, hosted by the Indian Society of Rheology and IIT Bombay, 10-12 December 2020.
2. Invited speaker at the symposium in honour of Professor E.S.G. Shaqfeh, held at Stanford University, 11 - 12 August 2019.
3. Plenary lecturer at the 30th Anniversary Symposium of the Korean Society of Rheology, Seoul, Korea, 21 - 24 May 2019.
4. Invited speaker at the IUTAM (International Union of Theoretical & Applied Mechanics) symposium on the Dynamics of Complex Fluids and Interfaces, Indian Institute of Technology Kanpur, India, 17 - 20 December, 2018.
5. Plenary lecturer at the 7th Pacific Rim Conference on Rheology, Jeju Island, Korea, 10 - 15 June 2018.
6. Invited speaker at the Symposium in honour of Professor K. Kesava Rao, Department of Chemical Engineering, Indian Institute of Science, Bangalore, 17 December 2016.
7. Invited speaker at the New Aspects of Micro- and Macroscopic Flows in Soft Matter conference, 15-17 August 2016, Okinawa, Japan
8. Plenary lecturer at the Korean-Australian Rheology Conference, Seoul, Korea, 5-7 November 2015
9. Invited speaker at the Microbiology@Monash 3rd Plenary Meeting, Melbourne, Australia, 3 December 2015
10. Plenary lecturer at the International Symposium on Rheology, Kyoto, Japan, 2013
11. Invited speaker at the Annual Statistical Mechanics Meeting, Melbourne, 1-2 December 2011.
12. Keynote speaker at the Korean-Australian Rheology Conference, Daejeon, Korea, 25-27 September 2011.
13. Invited speaker at the CECAM workshop on "Mesoscale Hydrodynamic Simulation of Non-Equilibrium and Driven Soft-Matter Systems", Forschungszentrum Juelich, Germany, 9-11 May 2011.
14. Invited speaker at the SERC School cum Symposium on Rheology of Complex Fluids, IIT Chennai, India, 4-9 January 2010.
15. Invited speaker at the workshop on "Flowing Complex Fluids: Rheological measurements and constitutive modelling", Institute for Mathematics and its Applications (IMA) at the University of Minnesota, USA, 14-18 September 2009.
16. Plenary lecturer at the 20th Anniversary Symposium of the Korean Society of Rheology, Seoul, Korea, 19-23 August 2009.
17. Invited speaker at the SERC School and Symposium on Rheology of Complex Fluids, IIT Mumbai, India, 18-22 February 2008.
18. Plenary lecturer at the Korean-Australian Rheology Conference, Jeju Island, Korea 16-18 September 2007.

## ORGANISATION OF NATIONAL & INTERNATIONAL SCIENTIFIC CONFERENCES

1. **Co-organizer** with Eric S. G. Shaqfeh (Stanford University, USA) of the International Workshop on Mesoscale and Multiscale Description of Complex Fluids at the Monash-Prato centre, Italy, from 5th–8th July 2006.
2. **Co-organizer** with Leslie Yeo and James Friend of the “Complex Fluids & Microfluidics” Workshop, Melbourne, Australia, 1-2 September, 2008.
3. **Co-organizer** with Burkhard Duenweg (Max-Planck Institute for Polymer Research, Germany) of school/workshop on “Fluid-Structure Interactions in Soft- Matter Systems: From the Mesoscale to the Macroscale” at the Monash-Prato centre, Italy, in November 2012. Workshop sponsored by the European organization Centre Européen de Calcul Atomique et Moléculaire (CECAM).
4. **Co-organizer** with David Boger of a one-day special symposium honouring Tam Sridhar on his 65th birthday, at the 6th Pacific Rim Conference on Rheology, Melbourne, 2014.
5. **Co-organizer** with Burkhard Duenweg (Max-Planck Institute for Polymer Research, Germany) and Friederike Schmid (Johannes Gutenberg University, Germany) of school/workshop on “Hydrodynamic Fluctuations in Soft-Matter Simulations” at the Monash-Prato centre, Italy, in February 2016. Workshop sponsored by CECAM.
6. **Co-organizer** with Burkhard Duenweg (Max-Planck Institute for Polymer Research, Germany) and Ignacio Pagonabarraga (University of Barcelona) of school/workshop on “Challenges in Multiphase Flows” at the Monash-Prato centre, Italy, in December 2019. Workshop sponsored by CECAM.
7. **Co-organizer** with Burkhard Duenweg (Max-Planck Institute for Polymer Research, Germany) and Charles Schroeder (University of Illinois, Urbana-Champaign, USA) of Flagship Workshop on “Ring Polymer Dynamics” at the Monash-Prato centre, Italy, to be held in June 2022. Workshop sponsored by CECAM. Proposal given an award as being amongst the best proposals of the 2019 call, and recipient of special financial support from CECAM headquarters at Lausanne.

## MEMBERSHIP OF CONFERENCE SCIENTIFIC ADVISORY COMMITTEES

1. Member of the International Advisory Board for the symposium on Rheology at the 21st International Union of Materials Research Societies - International Conference in Asia (IUMRS-ICA 2020), Thailand, October, 2020.
2. Member of the International Advisory Board for the XVIIIth International Congress on Rheology (ICR2020), Brazil, August, 2020.
3. Scientific Committee for the IUTAM (International Union of Theoretical and Applied Mechanics) symposium on complex fluids and interfaces, December 2018, India.
4. Member of Technical Sessions Organizing committee and co-chairman of the symposium on “Homogeneous Polymeric systems” for the XVIIth International Congress on Rheology (ICR2016), Kyoto, Japan, August 2016.
5. Co-chairman of the session on “Computational Rheology”, 85th Annual Society of Rheology meeting, October 5-9, 2014, Philadelphia, USA.
6. Member of the organising committee for the 6th Pacific Rim Conference on Rheology (PRCR-6) held in Melbourne, 2014. Additionally, **co-organiser** with David Boger of a one-day special symposium honouring Tam Sridhar on his 65th birthday, and co-chairman of the session on “Polymeric Fluids”.
7. International Advisory Board for the 5th Pacific Rim Conference on Rheology held in Hokkaido University, Sapporo, Japan, from August 1 to 6 2010.

8. National Advisory Committee of the XXIV International Conference on Statistical Physics of the International Union for Pure and Applied Physics held in Cairns, Queensland, Australia, from 19 to 23 July, 2010.
9. Scientific Committee for the 5th Australian-Korean Rheology Conference, Sydney, Australia, 1-4 November 2009.
10. Member of Technical Sessions Organizing committee and co-chairman of the session on Polymer Solutions, 79th Annual Society of Rheology meeting, October 7-11, 2007, Salt Lake City, Utah, USA.
11. Member of Technical Sessions Organizing committee and co-chairman of the session on Polymer Solutions, 77th Annual Society of Rheology meeting, October 16-20, 2005, Vancouver, Canada

## ARCHIVAL JOURNAL PUBLICATIONS

(Note that Ravi Jagadeeshan publishes under the name J. R. Prakash)

1. R. Kailasham, Rajarshi Chakrabarti, J. R. Prakash, "Rouse model with fluctuating internal friction", *J. Rheol.*, 65, 903-923 (2021).
2. R. Kailasham, Rajarshi Chakrabarti, J. R. Prakash, "How important are fluctuations in the treatment of internal friction in polymers?", *Soft Matter*, 17, 7133-7157 (2021).
3. A. Santra, B. Duenweg, J. R. Prakash, "Universal scaling and characterization of gelation in associative polymer solutions", *J. Rheol.*, 65, 549-581 (2021).
4. I. Pincus, A. Rodger and J. R. Prakash, "Viscometric functions and rheo-optical properties of dilute polymer solutions: Comparison of FENE-Fraenkel dumbbells with rodlike models", *J. Non-Newtonian Fluid Mech.*, 285, 104395 (2020).
5. K. Kumari, R. Padinhateeri, B. Duenweg and J. R. Prakash, "Computing 3D chromatin configurations from contact probability maps by Inverse Brownian Dynamics", *Biophysical Journal*, 118, 2193–2208 (2020).
6. R. Kailasham, Rajarshi Chakrabarti, J. R. Prakash, "Internal friction can be measured with the Jarzynski equality", *Phys. Rev. Res.*, 2, 013331, (2020).
7. S. Pan, D. A. Nguyen, P. Sunthar, T. Sridhar and J. R. Prakash, "Uniaxial extensional viscosity of semidilute DNA solutions", *Korea-Australia Rheology Journal*, 31, 255-266 (2019).
8. A. Santra, K. Kumari, R. Padinhateeri, B. Duenweg and J. R. Prakash, "Universality of the collapse transition of sticky polymers", *Soft Matter*, 15, 7876-7887 (2019).
9. J. R. Prakash, "Universal dynamics of dilute and semidilute solutions of flexible linear polymers", *Current Opinion in Colloid & Interface Science*, 43, 63-79 (2019).
10. R. Kailasham, Rajarshi Chakrabarti, J. R. Prakash, "Rheological consequences of wet and dry friction in a dumbbell model with hydrodynamic interactions and internal viscosity", *J. Chem. Phys.*, 149, 094903 (2018).
11. S. Pan, D. A. Nguyen, B. Duenweg, P. Sunthar, T. Sridhar, and J. R. Prakash, "Shear thinning in dilute and semidilute solutions of polystyrene and DNA", *J. Rheol.* 62, 845-867 (2018).
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## PEER REVIEWED CONFERENCE PROCEEDINGS

1. C. Sasmal, D. A. Nguyen, T. Sridhar, J. R. Prakash, and R. Prabhakar, 2016, "Concentration dependence of coil-stretch hysteresis in extensional flows of unentangled polymer solutions," Proceedings of the XVIIth International Congress on Rheology at Kyoto (Japan), from August 8 – 13th, 2016.
2. C. Sasmal, K. Hsiao, C. M. Schroeder, J. Ravi Prakash, 2016, "Stretch-relaxation of DNA molecules in semidilute solutions," Proceedings of the XVIIth International Congress on Rheology at Kyoto (Japan), from August 8 – 13th, 2016.
3. S. Pan, D. A. Nguyen, P. Sunthar, T. Sridhar, and J. R. Prakash, 2016, "Semidilute DNA Solutions in Shear Flow," Proceedings of the XVIIth International Congress on Rheology at Kyoto (Japan), from August 8 – 13th, 2016.
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21. P. Sunthar, J. R. Prakash, “Static and Dynamic Properties of Dilute Polymer Solutions: Brownian Dynamics Simulations of the Influence of Excluded Volume and Hydrodynamic Interactions,” *Fourteenth International Congress on Rheology*, Seoul, South Korea, 22 Aug. - 27 Aug., 2004.



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23. P. Sunthar, R. Prabhakar, J. R. Prakash, "Rescaling of Excluded Volume and Hydrodynamic Interaction Parameters in Bead Spring Chain Models with Finitely Extensible Springs," Fourteenth International Congress on Rheology, Seoul, South Korea, 22 Aug. - 27 Aug., 2004.
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26. J. R. Prakash, "Rouse Chains with Excluded Volume Interactions in Steady Shear Flow: Comparison of Brownian Dynamics Simulations with the Gaussian Approximation", 6th World Congress of Chemical Engineering, 23-27 September 2001, Melbourne, Australia, Paper 1090.
27. J. R. Prakash, "Material functions for Rouse chains with excluded volume interactions in simple shear flows", Proceedings of the XIIIth International Congress on Rheology, 20-25 August 2000, Cambridge, UK, Vol. 1, 338-339.

#### BOOK CHAPTERS

1. J. R. Prakash, The Kinetic Theory of Dilute Solutions of Flexible Polymers: Hydrodynamic Interaction, in *Advances in the Flow and Rheology of Non-Newtonian Fluids*, D.A. Siginer, D. De Kee and R. P. Chabra, eds., Elsevier Science, (1999).
2. J. R. Prakash, The Prediction of Universal Viscometric Functions for Dilute Polymer Solutions under Theta Conditions, in *Dynamics of Complex Fluids*, M. J. Adams, R. A. Mashelkar, J. R. A. Pearson, A. R. Rennie, eds., Imperial College Press-The Royal Society, (1998).
3. M. S. Willis, S. Bybyk, R. Collin and J. R. Prakash, Theory of Filtration, in *Advances in Transport Phenomena in Porous Media*, J. Bear, M. Y. Corapcioglu, eds., Martinus Nijhoff, Dordrecht, 343 (1987).
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#### CONFERENCE PRESENTATIONS

1. A. Santra (speaker), G. H. McKinley, J. R. Prakash, Dynamic signatures of gelation in associative polymer solutions, The Society of Rheology 92nd Annual Meeting, Bangor, Maine, 10-14 October 2021.
2. R. Kailasham (speaker), Rajarshi Chakrabarti, J. R. Prakash, Rouse model with fluctuating internal friction, The Society of Rheology 92nd Annual Meeting, Bangor, Maine, 10-14 October 2021.
3. I. Pincus (speaker), A. Rodger, J. R. Prakash, Rheology of semiflexible polymers in shear flow via Brownian dynamics and quasi-two-parameter theory, The Society of Rheology 92nd Annual Meeting, Bangor, Maine, 10-14 October 2021.
4. D. M. Robe (speaker), G. H. McKinley, J. R. Prakash, Linear viscoelasticity of associating star polymer networks, The Society of Rheology 92nd Annual Meeting, Bangor, Maine, 10-14 October 2021.
5. A. Santra, G. H. McKinley, J. R. Prakash (speaker), Dynamic signatures of gelation in associative polymer solutions, Statistical Mechanics of Soft Matter, hosted online by Griffith University and the University of Queensland, 14-15 December 2020.

6. I. Pincus (speaker), A. Rodger and J. R. Prakash, Viscometric functions and rheo-optical properties of dilute polymer solutions: Comparison of FENE-Fraenkel dumbbells with rodlike models, 18th International Congress on Rheology, held online, hosted by the Brazilian Society of Rheology, 12-17 December 2020.
7. R. Kailasham (speaker), Rajarshi Chakrabarti, J. R. Prakash, Coarse-grained models for the effects of internal friction on dilute polymer solution rheology, 18th International Congress on Rheology, held online, hosted by the Brazilian Society of Rheology, 12-17 December 2020.
8. D. M. Robe (speaker), J. R. Prakash, G. H. McKinley, Brownian Dynamics Simulation of Associating Star Polymer Networks, 18th International Congress on Rheology, held online, hosted by the Brazilian Society of Rheology, 12-17 December 2020.
9. A. Santra (speaker), G. H. McKinley, J. R. Prakash, Dynamic signatures of gelation in associative polymer solutions, 18th International Congress on Rheology, held online, hosted by the Brazilian Society of Rheology, 12-17 December 2020.
10. A. Santra, G. H. McKinley, J. R. Prakash (speaker), Dynamic signatures of gelation in associative polymer solutions, Complex Fluids-2020 held online, hosted by the Indian Society of Rheology and IIT Bombay, 10-12 December 2020.
11. J. R. Prakash (invited speaker), Four pedagogical lectures on “Polymer Kinetic Theory”, Statistical Mechanics of Soft Matter, University of Adelaide, Adelaide, 18-19 December 2019.
12. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Internal friction can be measured with the Jarzynski equality, Statistical Mechanics of Soft Matter, University of Adelaide, Adelaide, 16-17 December 2019.
13. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Internal friction can be measured with the Jarzynski equality, CECAM workshop on Challenges in Multiphase Flows, Monash University Prato Centre, Italy, 9–12 December 2019.
14. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Internal friction can be measured with the Jarzynski equality, 2019 Biennial Symposium of the Australian and New Zealand Associations of von Humboldt Fellows, Macquarie University, Sydney, 22-24 November 2019.
15. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Internal friction can be measured with the Jarzynski equality, The Society of Rheology 91st Annual Meeting, Raleigh, North Carolina, 20-24 October 2019.
16. R. Kailasham, R. Chakrabarti, J. R. Prakash (invited speaker), Internal friction can be measured with the Jarzynski equality, Shaqfeh Symposium, Stanford University, 11 - 12 August 2019.
17. J. R. Prakash (plenary lecture), Universal scaling and the characterisation of gelation in associative polymer solutions, 30th Anniversary Symposium of the Korean Society of Rheology, Seoul, Korea, 21 - 24 May 2019.
18. J. R. Prakash (invited speaker), Universal scaling and the characterisation of gelation in associative polymer solutions, IUTAM symposium on the Dynamics of Complex Fluids and Interfaces, Indian Institute of Technology Kanpur, India, 17 - 20 December, 2018.
19. Aritra Santra and J. R. Prakash (speaker), Universal scaling and the characterisation of gelation in associative polymer solutions, The Society of Rheology 90th Annual Meeting, Houston, Texas, 14-18 October 2018.
20. J. R. Prakash, The dynamics of polymer solutions at finite concentrations, 7th Pacific Rim Conference on Rheology, Jeju Island, Korea, 10-15 June 2018 (plenary lecturer).
21. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Non-equilibrium conformational dynamics of a coarse-grained polymer model with internal friction and hydrodynamic interactions, 9th Australian-Korean Rheology Conference, Sydney, 29 November-1 December 2017.

22. J. R. Prakash, Size, shape and diffusivity of a single Debye-Hückel polyelectrolyte chain in solution, Statistical Mechanics of Soft Matter, Sydney, 27-28 November 2017.
23. R. Kailasham, R. Chakrabarti, and J. R. Prakash (speaker), Non-equilibrium conformational dynamics of a coarse-grained polymer model with internal friction and hydrodynamic interactions, The Society of Rheology 89th Annual Meeting, Denver, Colorado, 8-12 October 2017.
24. J. R. Prakash, Stretch-relaxation of DNA molecules in semidilute solutions, Symposium in honour of Professor K. Kesava Rao, Department of Chemical Engineering, Indian Institute of Science, Bangalore, 17 December 2016 (invited speaker).
25. J. R. Prakash, Parameter-free prediction of DNA dynamics in planar extensional flow of semidilute solutions, Statistical Mechanics of Soft Matter, Melbourne, 28-29 November 2016.
26. C. Sasmal, K.-W Hsiao, C. M. Schroeder, and J. R. Prakash (Poster), Parameter-free prediction of DNA dynamics in planar extensional flow of semidilute solutions, Soft Matter - Theoretical and Industrial Challenges: Celebrating the Pioneering Work of Sir Sam Edwards, Isaac Newton Institute, Cambridge, 7-9 September 2016.
27. J. R. Prakash, Dynamics of Semidilute Polymer Solutions, New Aspects of Micro- and Macroscopic Flows in Soft Matter conference, Okinawa, Japan, 15-17 August 2016.
28. J. R. Prakash, Treating Fluctuating Hydrodynamic Interactions in Polymer Solutions Far from Equilibrium: Closure Approximations Beyond Zimm Theory, CECAM workshop on "Hydrodynamic Fluctuations in Soft-Matter Simulations", Monash University Prato Centre, Italy, February 9-12, 2016.
29. J. R. Prakash, Adhesive dynamics of parasitized red blood cells, Microbiology@Monash 3rd Plenary Meeting, Melbourne, Australia, 3 December 2015.
30. J. R. Prakash, Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations, Statistical Mechanics of Soft Matter, Melbourne, 30 Nov–1 Dec 2015.
31. J. R. Prakash, Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations, Korean-Australian Rheology Conference, Seoul, Korea, 5-7 November 2015.
32. W. C. Soysa, B. Dünweg, and J. R. Prakash (speaker), Size, shape and diffusivity of a single Debye-Hückel polyelectrolyte chain in solution, The Society of Rheology 87th Annual Meeting, Baltimore, Maryland, October 11-15, 2015.
33. C. Sasmal (poster) and J. R. Prakash, Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations, The Society of Rheology 87th Annual Meeting, Baltimore, Maryland, October 11-15, 2015.
34. J. R. Prakash (poster), Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations, 24th International Conference on Discrete Simulation of Fluid Dynamics, The Royal Society of Edinburgh, UK, 13-17 July 2015.
35. J. R. Prakash, Coil-stretch hysteresis in planar mixed flows of polymer solutions at finite concentrations, Ian Snook Conference on Chemical Physics, Dec. 4-5, 2014.
36. J. R. Prakash, Semidilute solutions in shear flow, 6th Pacific Rim Conference on Rheology (PRCR-6), Melbourne, 20-25 July 2014.
37. J. R. Prakash, Concentration Dependent Dynamics of Semidilute DNA Solutions, Statistical Mechanics of Soft Matter Meeting, Melbourne, 21-22 November 2013.
38. A. Jain, R. Hartkamp, C. Sasmal, A. S. Mehrotra, B. D. Todd, R. Prabhakar, J. R. Prakash, (speaker), Brownian dynamics simulations of semidilute polymer solutions undergoing planar mixed flow, The Society of Rheology 85th Annual Meeting, Montréal, Canada, October 13-17, 2013.
39. J. R. Prakash, Molecular simulation of complex fluids, Monash-Warwick Workshop "Simulation and Modelling" Melbourne, 18-20 March 2013.

40. J. R. Prakash, Concentration dependent dynamics of semidilute polymer solutions, CECAM workshop on "Fluid-Structure Interactions in Soft-Matter Systems: From the Mesoscale to the Macroscale", Monash University Prato Centre, Italy, 26-30 November 2012.
41. S. Pan, A. Jain, D. A. Nguyen, P. Sunthar, T. Sridhar, B. Duenweg, J. Ravi Prakash (speaker), Concentration dependent dynamics of semi-dilute DNA solutions, The XVIth International Congress on Rheology, Lisbon, Portugal, 5-10, August 2012.
42. A. Jain (poster), B. Duenweg, J. Ravi Prakash, Dynamic Crossover Scaling in Semidilute Polymer Solutions, The XVIth International Congress on Rheology, Lisbon, Portugal, 5-10, August 2012.
43. J. R. Prakash, Universal crossover dynamics of semidilute polymer solutions: DNA rheology and Brownian Dynamics simulations, Annual Statistical Mechanics Meeting, Melbourne, 1-2 December 2011.
44. J. R. Prakash, Concentration dependent dynamics of semidilute DNA solutions Korean-Australian Rheology Conference, Daejeon, Korea, 25-27 September 2011.
45. J. R. Prakash, Concentration dependent dynamics of semidilute DNA solutions, CECAM workshop on "Mesoscale Hydrodynamic Simulation of Non-Equilibrium and Driven Soft-Matter Systems", Forschungszentrum Juelich, Germany, 9-11 May 2011.
46. A. Jain, P. Sunthar, B. Duenweg and J. R. Prakash (speaker), Concentration dependent dynamics of polymer solutions: Universal behaviour from coarse-grained simulations, The Society of Rheology 83rd Annual Meeting, Cleveland, Ohio, October 9-13, 2011.
47. S. Pan (speaker), D. A. Nguyen, P. Sunthar, T. Sridhar, and J. R. Prakash, The shear rheology of semi-dilute DNA solutions, The Society of Rheology 83rd Annual Meeting, Cleveland, Ohio, October 9-13, 2011.
48. J. T. Bosko, and J. R. Prakash (speaker), Effect of solvent quality on the dynamics of dilute dendrimer solutions, XXIV International Conference on Statistical Physics of the International Union for Pure and Applied Physics, Cairns, Australia, 19 - 23 July, 2010
49. J. T. Bosko, and J. R. Prakash (speaker), Effect of solvent quality on the dynamics of dilute dendrimer solutions, Second International Soft Matter Conference, Granada, Spain, 4-8 July, 2010.
50. J. T. Bosko, and J. R. Prakash (speaker), Dynamics of dendrimer solutions, SERC School cum Symposium on Rheology of Complex Fluids, IIT Chennai, India, 4-9 January 2010.
51. T. T. Pham, and J. R. Prakash (speaker), Polymer Chains In A Poor Solvent Subjected To Extensional Flow, 5th Australian-Korean Rheology Conference, Sydney, 1-4 Nov 2009.
52. J. R. Prakash, Micro and Macro in the Dynamics of Dilute Polymer Solutions, Institute for Mathematics and its Applications (IMA) at the University of Minnesota, USA, 14-18 September 2009.
53. J. R. Prakash, Micro and Macro in the Dynamics of Dilute Polymer Solutions: Convergence of Theory with Experiment, 20th Anniversary Symposium of the Korean Society of Rheology, Seoul, Korea, 19-23 August 2009.
54. J. R. Prakash, Micro & Macro in the Dynamics of Polymer Solutions, Inauguration of the IITB-Monash Research Academy, November 26-29, 2008, Mumbai, India.
55. Shikha Somani (speaker), Eric Shaqfeh, and J R. Prakash, A Brownian dynamics study of the effect of solvent quality on the coil-stretch transition, The XVth International Congress On Rheology, Monterey, California 3–8 August 2008.
56. D. A. Nguyen, B. Dan, N. G. Parra-Vasquez, M. Pasquali (speaker), J R. Prakash, and T. Sridhar, Extensional rheology of single walled carbon nanotubes in liquids, The XVth International Congress On Rheology, Monterey, California 3–8 August 2008.
57. P. Sunthar (speaker) and J R. Prakash, Modelling the dynamic scaling of dilute polymer solutions and its application to rheology, The XVth International Congress On Rheology, Monterey, California 3–8 August 2008.

58. J. T. Bosko and J R. Prakash (speaker), Rheology of dendrimers in solution via Brownian dynamics simulations, The XVth International Congress On Rheology, Monterey, California 3–8 August 2008.
59. J. R. Prakash, Glassy Dynamics in Dilute Polymer Solutions near the Coil-Stretch Transition, SERC School/CEP Course and Symposium on Rheology of Complex Fluids, February 18-22, 2008, IIT Bombay, Mumbai, India.
60. J. R. Prakash, Glassy Dynamics in Dilute Polymer Solutions, Tri-University Workshop, December 6-7, 2007, Monash University, Melbourne, Australia (Keynote Lecture).
61. S K Pattanayek, and J. R. Prakash (speaker), Is the Blob model applicable to dilute polyelectrolyte solutions undergoing shear flow?, Molecular Modelling, November 27-30, 2007, Melbourne, Australia
62. J. R. Prakash, Is the Blob model applicable to dilute polyelectrolyte solutions undergoing shear flow?, SOR 79th Annual Meeting, October 7-11, 2007, Salt Lake City, Utah, USA.
63. J. R. Prakash, The Dynamics of Polymer Collapse as a Toy Model for Protein Folding, Biennial Conference of the Australian Association of Von Humboldt Fellows, September 7-9, 2007, Melbourne, Australia.
64. J. R. Prakash, Micro & Macro in the Dynamics of Polymer Solutions, Korean-Australian Rheology Conference 2007, September 16-18, 2007, Jeju Island, Korea (Plenary Lecture).
65. M. Bajaj, M. Pasquali, J. R. Prakash (speaker), Coil-stretch transition and the break-down of continuum models, XVth International Workshop on Numerical Methods for Non-Newtonian Flows (IWNMNNF 2007) June 6-10, 2007, Rhodes, Greece.
66. J. R. Prakash, Bulk Stress Hysteresis and Driven Glassy Dynamics in Extensional Flows of Polymer Solutions, AIChE Annual Meeting, Nov. 12-Nov. 16, 2006, San Francisco, USA.
67. J. R. Prakash, Convergence of Experiment and Theory for Dilute Polymer Solutions with Successive Fine Graining, International Workshop on Mesoscale and Multiscale Description of Complex Fluids, July 5-July 8, 2006, Prato, Italy.
68. P. P. Bhat (speaker), M. Bajaj, J. R. Prakash and M. Pasquali, Numerical analysis of the dynamics of stretching viscoelastic liquid filaments using the micro-macro Brownian Configurations Fields (BCF) method AIChE Annual Meeting, Oct. 30-Nov. 4 2005, Cincinnati, USA.
69. P Sunthar, D. A. Nguyen, R. Dubbelboer, J R. Prakash (speaker), and T Sridhar, Elongational viscosity of dilute solutions of DNA molecules, Society of Rheology 77th Annual Meeting, 16–20 October 2005, Vancouver, Canada.
70. R. Prabhakar, J R. Prakash (speaker), and T Sridhar, Influence of configuration-dependent drag on the capillary thinning of filaments of dilute polymer solutions, Society of Rheology 77th Annual Meeting, 16–20 October 2005, Vancouver, Canada.
71. J. R. Prakash, Understanding and Predicting the Dynamics of Dilute Polymer Solutions, Biennial Conference of the Australian Association of Von Humboldt Fellows, 2 – 4 September 2005, Brisbane, Australia
72. J. R. Prakash, Understanding and Predicting the Dynamics of Dilute Polymer Solutions, Australian-Korean Rheology Conference, 17– 20 July 2005, Cairns, Australia (Keynote Lecture).
73. M. Bajaj (speaker), P. P. Bhat, J. R. Prakash and M. Pasquali, Micro-macro Simulation of Transient Viscoelastic Free Surface Flows using the Brownian Configuration Fields Method, XIVth International Workshop on Numerical Methods for Non-Newtonian Flows Santa Fe, 12 – 15 June 2005, New Mexico U.S.A.
74. R. Duggal (speaker), P. Sunthar, J. R. Prakash, and M. Pasquali, Molecular Conformation of DNA in a Small-scale Coating Flow using a Macro-Micro Approach, AIChE Annual Meeting, 7–12 November 2004, Austin, USA.
75. J. R. Prakash, Unravelling the Dynamics of Polymer Solutions in Extensional Flows, Complex fluids workshop, The 12th Biennial Computational Techniques and Applications Conference, CTAC 2004, 30 September 2004, Melbourne, Australia (Invited speaker).

76. P. Sunthar (speaker), and J. R. Prakash, Nonlinear Bead Spring Chain Models for Dilute Polymer Solutions: Rescaled Intra-Molecular Interactions and Successive Fine Graining, 22nd IUPAP International Conference on Statistical Physics, STATPHYS 22, 4–9 July 2004, Bangalore, India.
77. M. Bajaj, M. Pasquali, and J. R. Prakash (speaker), Micro-Macro Simulation of Viscoelastic Coating Flows, CRC Smartprint Conference, 6–7 July 2004, Melbourne, Australia.
78. M. Bajaj (speaker), J. R. Prakash, and M. Pasquali, Micro-Macro Simulation of Viscoelastic Hele-Shaw Flow, Moving Boundaries 2003, Seventh International Conference on Computational Modelling of Free and Moving Boundary Problems, 4–6 November 2003, Sante Fe, USA.
79. R. Prabhakar, P. Sunthar, and J.R. Prakash (speaker), Unravelling the Dynamics of Polymer Solutions in Extensional Flows, New Materials and Complexity, 3–7 November 2003, Kioloa, Australia.
80. R. Prabhakar and J. R. Prakash (speaker), Parameter-Free Predictions of the Behaviour of Dilute Polymer Solutions in Extensional Flows: Comparison with Experiment, Society of Rheology 75th Annual Meeting, 12–16 October 2003, Pittsburgh, USA.
81. P. Sunthar (speaker) and J. R. Prakash, Predictions of the evolution of DNA conformations in an extensional flow, Korean-Australian Rheology Conference, Gyeongju, Korea, 24–26 September 2003.
82. R. Prabhakar (speaker) and J.R. Prakash, Prediction of Rheological Properties of Dilute Polymer Solutions in Extensional Flows, Korean-Australian Rheology Conference, Gyeongju, Korea, 24–26 September 2003.
83. J. R. Prakash, Molecular Rheology of Dilute Polymer Solutions, Mini-Symposium on Flows of Complex Fluids, 5th International Congress on Industrial and Applied Mathematics, ICIAM 2003, 7–9 July 2003, Sydney, Australia (Invited speaker).
84. R. Prabhakar, and J. R. Prakash (speaker), Superposition of Finite Extensibility, Hydrodynamic Interaction and Excluded Volume Effects in Bead-Spring Chain Molecules for Dilute Polymer Solutions, XIIIth International Workshop on Numerical Methods for Non-Newtonian Flows, 4–7 June 2003, Lausanne, Switzerland.
85. R. Prabhakar, and J. R. Prakash (speaker), Brownian dynamics simulations of Rouse Chains with Excluded Volume and Hydrodynamic Interactions, 6th European Conference on Rheology, EURHEO, 1–6 September 2002, Erlangen, Germany.
86. J. R. Prakash (speaker) and R. Prabhakar, Gaussian approximation for Hookean dumbbells with hydrodynamic interaction and excluded volume, Australian-Korean Rheology Conference, Melbourne, Australia, 20–21 September 2001.

## INVITED LECTURES

1. Invited Lecture at the Royal Society Indo-UK Forum on the Dynamics of Complex Fluids, held in association with the program at the Isaac Newton Institute for Mathematical Science, Cambridge, at the Cavendish Laboratory, Cambridge, UK, June 1996.
2. Invited Lecture during the research program on Jamming and Rheology: Constrained Dynamics on Microscopic and Macroscopic Scales, conducted by the Institute for Theoretical Physics, University of California, Santa Barbara, USA, December 1997.
3. Invited Lecture at the workshop on Mathematics in Industry, co-sponsored by the Indian Institute of Science, Bangalore and the Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, January 1998.
4. Invited Lecture at the Fluid Dynamics Colloquium, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, February 1999.
5. Invited Lecture at the Institute of Mathematical Sciences, Chennai, March 1999.
6. Invited Lecture at the Institut für Polymer, Swiss Federal Institute for Technology, Zürich, Switzerland, October 1999.
7. Invited Lecture at the Cavendish Laboratory, University of Cambridge, Cambridge, United Kingdom, October 1999.

8. Invited Lecture at the Department of Mathematics, University of Kaiserslautern, Germany, April 2000.
9. Invited Lecture at the Department of Chemical Engineering, Monash University, Australia, May 2000.
10. Invited Lecture at the Mathematics Colloquium, Department of Mathematics, Monash University, Australia, July 2001.
11. Invited Lecture at the Department of Mechanical and Mechatronic Engineering, University of Sydney, Australia, December 2001.
12. Invited to give the Engineering Deans Seminar, Monash University, Australia, August 2002.
13. Invited Lecture at the Department of Mathematics, University of Kaiserslautern, Germany, August 2002.
14. Invited Lecture at the Department of Chemical Engineering, University of Melbourne, Australia, October 2002.
15. Invited Lecture at the Applied Physics Department, Royal Melbourne Institute of Technology, Australia, July 2003.
16. Invited to give a seminar at the Lunch Maths Seminar series, Department of Mathematics, Monash University, Australia, September 2003.
17. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Madras, India, December 2003.
18. Invited Lecture at the Department of Physics, Indian Institute of Technology, Madras, India, December 2003.
19. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, December 2003.
20. Invited to give the Department seminar at the Department of Chemical Engineering, Rice University, USA, February 2004.
21. Invited to give the Department seminar at the Department of Chemical Engineering, University of Washington, St Louis, USA, February 2004.
22. Invited Lecture to the Australian Society of Rheology as part of the 2005 Rheology Lecture Series, Melbourne, Australia, May 2005
23. Invited Lecture at the Centre for Molecular Simulation, Swinburne University of Technology, Melbourne, Australia, June 2005.
24. Invited Lecture at the Department of Chemical Engineering, University of Queensland, Australia, September 2005.
25. Invited Lecture at the Department of Applied Mathematics, Research School of Physical Sciences, Australian National University, Canberra, Australia, September 2005.
26. Invited speaker at the Department Colloquium in the Department of Chemical Engineering, Stanford University, USA, October 2005.
27. Invited Lecture at the Institute for Polymer Physics, Department of Materials, ETH Zürich, July 2006.
28. Invited Lecture at the Max Planck Institute for Polymer Research, Mainz, Germany, August 2006.
29. Invited speaker at the Department Colloquium in the Department of Chemical Engineering, Stanford University, USA, November 2006.
30. Invited to give the Department seminar at the Department of Chemical Engineering, MIT, USA, November 2006.
31. Invited Lecture at the Monash School of Mathematical Sciences, Colloquium, Monash University, Australia, April 2007.
32. Invited speaker at the Rheology Group Seminar in the Department of Chemical Engineering, Stanford University, USA, October 2007.
33. Invited Lecture at the Max Planck Institute for Polymer Research, Mainz, Germany, June 2008.
34. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Madras, India, January 2009.

35. Invited Lecture at the Department of Chemical Engineering, Rice University, USA, September 2009.
36. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Mumbai, India, December 2009.
37. Invited Lecture at the Fluid Dynamics Colloquium, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, December 2009.
38. Invited Lecture at the Fluid Dynamics Colloquium, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, June 2011.
39. Invited Lecture at the Max Planck Institute for Polymer Research, Mainz, Germany, November 2012.
40. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, December 2012.
41. Invited speaker at the Complex Fluids and Polymer Engineering Group Seminar, National Chemical Laboratory, Pune, India, December 2012.
42. Invited Lecture at the Department of Chemical Engineering, University of Queensland, Australia, September 2013.
43. Invited Lecture to the Robert K. Prud'homme group, Department of Chemical & Biological Engineering, Princeton University, October 2013.
44. Invited speaker in the Comp Chem Seminar at the Research School of Chemistry, ANU, Australia, February 2014.
45. Invited Lecture to the Doyle/McKinley group, MIT, USA, February 2014.
46. Invited Lecture at the Department of Chemical Engineering, Rice University, USA, April 2014.
47. Invited speaker in the Polymer Seminar at the Program in Polymer Science and Technology (PPST), MIT, USA, April 2014.
48. Invited Lecture at the Molecular Organisation and Assembly in Cells Doctoral Training Centre, University of Warwick, UK, June 2014.
49. Invited Lecture at the Molecular Organisation and Assembly in Cells Doctoral Training Centre, University of Warwick, UK, October 2014.
50. Invited Lecture at the Department of Chemical Engineering, Columbia University, USA, October 2015.
51. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Mumbai, India, January 2015.
52. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, January 2015.
53. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Mumbai, India, February 2016.
54. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Delhi, India, February 2016.
55. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Kanpur, India, February 2016.
56. Invited Lecture at the Department of Biosciences and Bioengineering, Indian Institute of Technology, Mumbai, India, December 2016.
57. Invited Lecture at the Department of Chemical Engineering, California Institute of Technology, Pasadena, USA, October 2017.
58. Invited Lecture to Professors Julie Kornfield and Zhen-Gang Wang's groups, Department of Chemical Engineering, California Institute of Technology, Pasadena, USA, August 2018.
59. Invited Lecture to Professors Matteo Pasquali, Anatoly Kolomeisky and Fred MacKintosh's groups, Department of Chemical and Biomolecular Engineering, Rice University, Houston, USA, October 2018.
60. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Technology, Mumbai, India, December 2018.



61. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, December 2018.
62. Invited Lecture at the Molecular Sciences Department, Macquarie University, Sydney, May 2019.
63. Invited Lecture to Professor Gareth McKinley's group, Department of Mechanical Engineering, Massachusetts Institute of Technology, Boston, USA, August 2019.
64. Invited Lecture (co-sponsored as a ChBE 565 Seminar) at the Department of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign, October 2019.
65. Invited Lecture at the Department of Chemical Engineering, Indian Institute of Science, Bangalore, India, February 2020.