ZULFIQUAR REZA

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SUMMARY OF QUALIFICATIONS

I have 20 years of experience in the oil and gas industry, research and academia. I am currently an associate professor of petroleum engineering at Mewbourne School of Petroleum and Geological Engineering, The University of Oklahoma, Norman, OK. My current research interests are in advanced reservoir simulation and simulator development; multi-physics, multi-scale coupled systems modeling; accelerated computing; data assimilation; integrated reservoir modeling and management under uncertainty.

I started my career in petroleum engineering faculty at Bangladesh University of Engineering and Technology (BUET), Dhaka. During my tenure at BUET, I taught 7 different petroleum engineering courses. Later, I worked as post-doctoral research associate at University of Colorado, Boulder in the Geological Sciences Department. I also worked as a post-doctoral researcher at Schlumberger's prestigious Gould Research Center focusing on flow assurance problem. At Schlumberger's Reservoir Simulation Center of Excellence in Abingdon, Oxford, UK, I have worked on ECLIPSE simulator development. ECLIPSE is considered the standard reservoir simulator and a leading reservoir simulator in the world by usage.

Most of my past research endeavors encompassed multiple disciplines. For my PhD, I worked on inverse-problem solution of integrated reservoir modeling, delving into reservoir flow simulation, constrained optimization, as well as spatial interpolation methods. At University of Colorado-Boulder, my research and development effort revolved around capturing geological and geophysical constraints into deepwater and carbonate reservoir models. At Schlumberger Cambridge Research, I focused on integration of association-based EOS models into thermal transient compositional multiphase-flow simulation to address hydrates-related flow assurance problems for subsea systems.

I have a global industrial, research and academic experience spanning India, Bangladesh, Canada, USA, UK, and UAE. I have been involved in several integrated field development projects as well as pilot projects for enhanced oil recovery methods and reservoir surveillance and monitoring. I have also worked on unconventional reservoirs related consulting projects. Prior to joining The University of Oklahoma, I led next-generation simulation effort for one of Chevron's largest fields in Asia.

I have contributed to a monograph on integrated reservoir modeling. I have published in several peer-reviewed journals and have many conference papers. During my time at Schlumberger, I contributed to industrial trade secret and a patent application. I briefly served as interim Head of Department in Petroleum and Mineral Resources Department at BUET.

EDUCATION
- PhD, Petroleum Engineering, University of Alberta, Edmonton, Canada (2003)
- MS, Petroleum Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh (1997)
- BTech, Mining Engineering, Indian Institute of Technology, Kharagpur, India (1994)

SUMMARY OF PROFESSIONAL EXPERIENCE

- University of Oklahoma, Norman, OK (2016 - present)
  Associate Professor, Petroleum Engineering
- Chevron, Dhaka, Bangladesh (2015)
  Senior Petroleum Engineer
- NITEC LLC, Denver, CO (2012 - 2014)
  Senior Reservoir Engineer
- Schlumberger (2006 - 2012)
  Consulting Reservoir Engineer, Abu Dhabi & Dubai, UAE: 2010 - 2012
  Modeling and Simulation Engineer, Abingdon, UK: 2008 - 2010
  Post-doctoral Researcher, Cambridge, UK: 2006 - 2007
- University of Colorado, Boulder (2004 - 2006)
- Bangladesh University of Engineering and Technology (1996 - 2004)
  Assistant Professor, Petroleum Engineering (2001 - 2004)
  Lecturer, Petroleum Engineering (1996 - 2001)

PROFESSIONAL RECOGNITION

- Schlumberger DCS President Award for Dorra Field Development Project (2012)
- Inventor Recognition Award, Schlumberger (2010)

PROFESSIONAL EXPERIENCE (ACADEMIA)

Mewbourne School of Petroleum and Geological Engineering, The University of Oklahoma, Norman, OK: Associate Professor

University of Colorado, Boulder, CO, USA (2004 - 2006)
  Post-doctoral Research Associate, Reservoir Characterization & Modeling Laboratory

- Developed stochastic deepwater reservoir-modeling technique incorporating sequence-stratigraphic and geomorphic constraints
- Modeled lateral cyclic heterogeneity in Carbonates and its impact on multiphase flow
- Devised workflows for integrated reservoir characterization and modeling using LIDAR and aerial imagery as well as subsurface data
- Given invited lectures on geostatistics for course 'Petroleum Reservoir Characterization and Modeling'. Attended by students from University of Colorado, Boulder and Colorado School of Mines.

Bangladesh University of Engineering and Technology, Dhaka, Bangladesh 1996 - 2004
   Assistant Professor, Petroleum Engineering (2001 - 2004)
   Lecturer, Petroleum Engineering (1996 - 2001)
   On Sabbatical for PhD study at University of Alberta (1997 - 2000)

- Taught seven different graduate-level petroleum engineering courses
    - Rock and Fluid Properties
    - Well Logging and Formation Evaluation
    - Petroleum Production Engineering
    - Well Test Analysis
    - Geostatistical Methods in Reservoir Characterization
    - Analytical and Testing Laboratory
    - Petrophysical and Testing Laboratory
    - Petroleum Reservoir Engineering (Undergraduate)

University of Alberta, Edmonton, Canada: Teaching Assistant

- Natural Gas Engineering (Fall 1998)

PROFESSIONAL EXPERIENCE (INDUSTRY)

Chevron 2015
Senior Petroleum Engineer, Dhaka, Bangladesh: 2015 - Present
- Led next generation reservoir simulation (INTERSECT) effort for Chevron's largest field in Asia as well as advising on other fields in Bangladesh.
- Key contribution to full-cycle-depletion-plan and future-wells projects.
- Key involvement in compression program.
- Identification of reserve and recovery growth plans.

NITEC LLC, Denver, CO, USA: Senior Reservoir Engineer (2012 - 2014)
- Integrated Field Development Project (of high water-cut tight-permeability field; Mississippi Lime formation for Repsol & SandRidge)
    - Analytical type-curve generation based on 2500+ wells.
    - Reservoir simulation model updating and calibration of townships and sector models.
    - Hydraulic fracture design and history-matching of hydraulically fractured wells.
- Gas Condensate Fluid Characterization (Woodford shale formation for Cimarex)
    - Equation of State fluid characterization of multiple fluid samples.
    - Field-wide condensate yield distribution mapping.
- Hydraulic Fracture Modeling (Eagle Ford formation for Aurora; Bakken and Three Forks formations for Halcon)

- History matching of hydraulically fractured wells using unified geomechanics-guided reservoir fluid flow simulation.
- Gas Storage Reservoir Engineering (for Ameren)
  - Model updating and calibration.
  - Material balance study.
- COZSim Reservoir Simulation Development (in collaboration with Colorado School of Mines, Unconventional Reservoir Engineering Project, CSM-UREP)
  - Implemented thermodynamics of confinement (nano-scale phase behavior).
  - Extended single-porosity system to dual-porosity system.
  - Implemented matrix-fracture diffusion and molecular diffusion.

Schlumberger 2006 - 2012

Post-doctoral Researcher, Cambridge, UK: 2006 - 2007

Flow assurance of hydrates-related problems in deepwater production system

Selected accomplishments:
- Developed and modeled transient thermal hydraulics for hydrate formation risk using Statistical Association-based Fluid Theory (SAFT) EOS and Drift-flux based multiphase flow models.
- Investigated control issues of subsea systems (shut-in and restart scenarios) using simple fluids and K-Value flash.
- Performed comparative investigation on transient (ECLIPSE Drift-flux) and steady-state (PIPESIM) thermal hydraulics for deepwater production system.
- Assisted on flowline experimental data interpretation using PIPESIM models.
- Collaborated with several groups of Imperial College, London under DTI, UK sponsorship.

Modeling and Simulation Engineer, Abingdon, UK: 2008 - 2010

Development and maintenance of compositional, black-oil and thermal simulators. Helped some key clients with critical simulator issues or enhancements.

Selected accomplishments:
- Formulation
  - PC-SAFT EOS model framework formulated to be used in multiphase flash.
  - Extended Pedersen viscosity model in compositional simulator E300. Rotational coupling factors are composition dependent. This enabled composition-dependent viscosity variation with much wider range.
  - Improved saturation pressure calculation for E300, PVTToolbox & PVTi.
  - Contributed to black-oil simulator extension for micro-emulsion phase modeling.
  - Formulated features in compositional simulator to facilitate multi-stage hydraulic fracture or re-fracture modeling in E300 for shale gas/tight gas simulation.

- ▪ Restructured, extended User Defined Argument (UDA) architecture for smart simulation.

- Implementation
  - ▪ Implemented enhanced fluid phase-labeling above the gas-oil contact using equilibration phase labeling calculation.
  - ▪ Improved equilibration of miscible flooding models in ECLIPSE.
  - ▪ Implemented fluid-in-place dependent region-wise datum-corrected potentials.
  - ▪ Improved scaling of surface gas concentration. Outliers in gas concentration are calibrated to equilibrium concentration based on Langmuir isotherms data for Coalbed methane simulation.
  - ▪ Implemented User Defined Argument UDA for EOR (Alkaline, API, Foam, Polymer, Salt, Solvent, Surfactant) and Tracer mnemonics.
  - ▪ Implemented UDA for numerous well, group and connection mnemonics.
  - ▪ Enhanced thermal heavy-oil equilibration method.
  - ▪ Implemented improved thermal rock-filled energy convergence method related to heat-loss simulation.

- Coupled geomechanical flow simulation
  - ▪ Studied (training) workflows on geomechanical history-matching for subsidence, compaction, and well-integrity issues.

Consulting Reservoir Engineer, Abu Dhabi & Dubai, UAE: 2010 - 2012
- Bu Hasa Electro-Magnetic Measurements Integration Project for Waterflood Monitoring (for ADCO Bu-Hasa), 2012, UAE
  - ▪ Integration of crosswell electro-magnetic measurements into dynamic reservoir model (Industry first).
  - ▪ Time-lapse 3D saturation distribution history-matching.
  - ▪ Workflow implementation for multi-scale multi-physics inversion.

- Dorra Field Development Project (for Khafji Joint Operations, joint venture of Saudi Aramco and Kuwait Oil Company), 2011-12, UAE
  - ▪ Integrated field development planning of green off-shore gas-condensate reservoir.
  - ▪ Development scenarios selection and modeling.
  - ▪ Well placement and trajectory selection and optimization.
  - ▪ Simulation model calibration.
  - ▪ Condensate banking study.
  - ▪ Sustained capacity testing.

- Pattern Flood Management Project for North East Bab Field (for ADCO NEB), 2011, UAE
  - ▪ VIP to ECLIPSE conversion.

- WAG Modeling Project for Asab Thamama Field (for ADCO Asab), 2010-11, UAE
  - Interpretation and numerical modeling of time-lapsed fall-off tests for WAG injector in Saphir.
  - Implementation of hysteresis model for WAG modeling.
  - History-matching of hysteretic model using MEPO.
  - Modeling and comparison of CO_2 miscible and lean gas WAG.

PUBLICATIONS

Monograph

X.H. Wen, C.V. Deutsch, S.A. Cullick, and Z.A. Reza: "*Integration of Production Data in Generating Reservoir Models*", Center for Computational Geostatistics, Edmonton, Alberta, 2005, ISBN 0-9738460-0-3, 205 pages.

Journal Publications

C.S. Kabir, M. Elgmati, Z.A. Reza. 2012: "Estimating Drainage-Area Pressure with Flow-After-Flow Testing", *SPE Reservoir Engineering & Formation Evaluation*, 15, 5, pp 571-583.

Z.A. Reza, M.J. Pranter and P. Weimer. 2006: "ModDRE: A Program to Model Deepwater Reservoir Elements Using Geomorphic and Stratigraphic Constraints", *Computers & Geosciences*, 32, 8, pp 1205-1220.

D.A. Budd, M.J. Pranter and Z.A. Reza. 2006: "Lateral Periodic Variations in the Petrophysical and Geochemical Properties of Dolomite", *Geology*, 34, 5, pp 373-376.

M.J. Pranter, Z.A. Reza and D.A. Budd. 2006: "Reservoir-scale Characterization and Multiphase Fluid-flow Modeling of Lateral Petrophysical Heterogeneity within Dolomite Facies of the Madison Formation, Sheep Canyon and Lysite Mountain, Wyoming", *Petroleum Geoscience* 12, 1, pp 29-40.

Conference Proceedings and Technical Reports

2011

T. Pfeiffer, Z.A. Reza, D. Schechter, W.D. McCain, O.C. Mullins: "Determination of Fluid Composition Equilibrium under Consideration of Asphaltenes – a Substantially Superior Way to Assess Reservoir Connectivity than Formation Pressure Surveys", SPE Annual Technical Conference and Exhibition, Denver, USA, October 30 - November 3, 2011. SPE 145703.

C.S. Kabir, M. Elgmati, Z.A. Reza: "Estimating Drainage-Area Pressure with Flow-After-Flow Testing", SPE Annual Technical Conference and Exhibition, Denver, USA, October 30 - November 3, 2011. SPE 146049.

T. Pfeiffer, Z.A. Reza, D. Schechter, W.D. McCain, O.C. Mullins: "Fluid Composition Equilibrium; a Proxy for Reservoir Connectivity", SPE Offshore Europe 2011 Conference, Aberdeen, UK, September 6 - 8, 2011. SPE 145703.

T. Pfeiffer, Z.A. Reza, W.D. McCain, D. Schechter, O.C. Mullins: "Determination of Fluid Composition Equilibrium—a Substantially Superior Way to Assess Reservoir Connectivity than Formation Pressure Surveys", *SPWLA 52nd Annual Logging Symposium,* May 14-18, 2011.

2010

O.C. Mullins, J.Y. Zuo, D.E. Freed, H. Elshahawi, C. Dong, T. Pfeiffer, Z.A. Reza, D. Schechter: "Asphaltene gradients and tar mat formation via downhole fluid analysis and novel asphaltene science", *Rio Oil & Gas Expo and Conference 2010 Proceedings,* September 13-16, 2010. IBP 3242_10.

A. Goodwin, A. Meredith, S.M. Huang, M. Williams, Z.A. Reza, C. Lenn, M. Miller, N. Lawrence, K. Robinson, C. Pantelides, P. Lawrence, E. Luna-Ortiz, Y.-S. Cheng, M. Trusler, L. Ruffine, C. Corrao, G. Jackson, A. Galindo, A. Haslem, C. Adjiman, C. Immanuel, J. Rodriguez-Perez, G. Maitland: "Integrated Sensors, Modelling and Control: Subsea Oil and Gas Production Systems", *OFSR/RN/2010/016/Chemistry/P, Schlumberger,* January, 2010.

Pre-2010

Z.A. Reza, M.J. Williams: "SAFT flash in Eclipse", *OFSR/RN/2007/052/FLUIDS/C, Schlumberger,* March, 2007.

Z.A. Reza, M.J. Williams: "Isothermal Subsea flowline modeling in Eclipse", *OFSR Report OFSR/RN/2007/007/RFM/C, Schlumberger,* January, 2007.

M.J. Pranter, D.A. Budd, and Z.A. Reza: "Reservoir-scale Characterization and Modeling of Lateral Petrophysical and Geochemical Variability within Dolomite Facies of the Madison Formation, Sheep Canyon and Lysite Mountain, Wyoming", 2005 West Texas Geological Society Fall Symposium, Midland, TX, October 28, 2005.

M.J. Pranter, Z.A. Reza and P. Weimer: "Deepwater Reservoir Modeling Using Sequence-Stratigraphic and Geomorphic Constraints", 2005 SPE Annual Technical Conference and Exhibition, Dallas, TX, October 9-12, 2005, SPE 95952.

Z.A. Reza, C.V. Deutsch and X.H. Wen: "Inversion of Fault Zone Properties Using Dynamic Data", *Fifth Annual Report for the Center for Computational Geostatistics,* University of Alberta, September, 2003.

Z.A. Reza, C.V. Deutsch and X.H. Wen: "Variogram Inversion and Uncertainty Using Dynamic Data", *Fifth Annual Report for the Center for Computational Geostatistics,* University of Alberta, September, 2003.

Z.A. Reza, C.V. Deutsch and X.H. Wen: "Simultaneous Inversion of Unique ϕ/k Features from Production Data", *Fifth Annual Report for the Center for Computational Geostatistics,* University of Alberta, September, 2003.

Z.A. Reza, C.V. Deutsch and X.H. Wen: "Simultaneous Inversion of Porosity and Permeability via Collocated Cokriging", *Fourth Annual Report for the Center for Computational Geostatistics,* University of Alberta, 21-22 March 2002.

Z.A. Reza and C.V. Deutsch: "Sensitivity Calculations and Derived Information", *Third Annual Report for the Center for Computational Geostatistics,* University of Alberta, 23-24 March 2001.

Z.A. Reza and C.V. Deutsch: "A Multilevel Technique for Dynamic Data Integration in Reservoir Characterization", *Second Annual Report for the Center for Computational Geostatistics,* University of Alberta, March 23-24, 2000.

C.V. Deutsch, Y.L. Xie, Z.A. Reza and B. Norris: "Accounting for Deterministic Trends in Geostatistical Modeling of Categorical and Continuous Variables", *Second Annual Report for the Center for Computational Geostatistics,* University of Alberta, March 23-24, 2000.

E. Gomes and Z.A. Reza: "Effect of High Velocity Pressure Transient Analysis of Multilayered Gas Reservoirs", 1998 SPE Gas Technology Symposium, pages 111-117, Calgary, Canada, 15-18 March 1998. SPE 39968.

E. Gomes and Z.A. Reza: "A New Semi-Analytical Pressure Transient Model for Layered Gas Reservoirs Under Various Reservoir and Well Conditions", 1998 SPE Oil and Gas Conference and Exhibition, New Delhi, India, 17-19 February 1998. SPE 39526.

Abstracts

M.J. Pranter, Z.A. Reza and P. Weimer: "A Novel Integrated Approach to Stochastic Deepwater Reservoir Modeling Using Sequence-Stratigraphic and Geomorphic Constraints", AAPG 2005 Annual Convention, Calgary, Canada, June 19-22.

M.J. Pranter and Z.A. Reza: "Impact of Lateral Petrophysical Cyclicity on Static Connectivity and Fluid Flow within Dolomite Reservoirs Based on Outcrop Analogs", AAPG 2005 Annual Convention, Calgary, Canada, June 19-22.

M.J. Pranter, D.A. Budd, and Z.A. Reza: "Reservoir-scale characterization and modeling of lateral petrophysical and geochemical variability within dolomite facies of the Madison Formation, Sheep Canyon and Lysite Mountain, Wyoming": in Peter Lufholm and Denise Cox (eds.), *Unconventional Reservoirs Technology and Strategies, Alternative Perspectives for the Permian Basin, WTGS Publication #05-115*, p. 193-196, WTGS 2005 Fall Symposium, Midland, Texas.

PhD Thesis

Z.A. Reza: *Some Aspects of Production Data Integration in Reservoir Modeling,* University of Alberta, Edmonton, Canada, June 5, 2003. Supervisor: Prof. C.V. Deutsch.

MS Thesis

Z.A. Reza: *Pressure Transient Analysis for Multi-layered Gas Reservoirs under Various Reservoir Conditions,* BUET, Dhaka, Bangladesh, June 5, 1997. Supervisor: Prof. E. Gomes.

BTech Thesis

Z.A. Reza: *An Application of Risk Analysis Techniques to Mine Accident Database Using Microcomputers,* IIT, Kharagpur, India, 1994. Supervisors: Prof. A. Bhattacharjee and Prof S.K. Mukhopadhyay.

Supervision (Graduate)

MS in PMR Engg. - "Permeability Prediction Using Neural Network with Post-processing", *BUET,* March 2004.

Supervision (Undergraduate)

BS in Chemical Engg. - "Well Placement Using Genetic Algorithm", *BUET,* 2003.

BS in Chemical Engg. - "Tortuous Electrical Conduction Flow Path in Porous Beds", *BUET,* 2003.

TALKS AND SEMINARS

Numerous client presentations.

Subsea Flow Assurance, talk for Molecular Systems Engineering, Imperial College, London, March 2007.

Deepwater Reservoir Modeling Using Sequence-Stratigraphic and Geomorphic Constraints, talk at 2005 SPE Annual Technical Conference and Exhibition, Dallas, TX, October 11, 2005.

Dynamic Data Inversion in Reservoir Modeling, talk for Marathon Center of Excellence for Reservoir Studies, Colorado School of Mines, USA, May 4, 2005.

Production Data Integration in Reservoir Modeling, talk for AAPG Student Chapter, CU Boulder Section, Lecture Series, University of Colorado, Boulder, December 12, 2004.

Simultaneous Porosity Permeability Inversion Using Multiple Well Production Data, talk at Fourth Annual Sponsors Meeting for the Center for Computational Geostatistics, University of Alberta, Canada, March 21-22, 2002.

Advances in Production Data Integration, talk at Third Annual Sponsors Meeting for the Center for Computational Geostatistics, University of Alberta, Canada, March 23-24, 2001.

Stochastic Simulation for Heterogeneity Modeling and Uncertainty Quantification, talk for Schlumberger Quest2000, Canadian Technical Forum and Users Meeting, Canmore, Canada, 16th May 2000.

Multilevel Technique in Dynamic Data Integration in Reservoir Characterization, talk at Second Annual Sponsors Meeting for the Center for Computational Geostatistics, University of Alberta, Canada, March 23-24, 2000.

PROFESSIONAL TRAINING/WORKSHOP

- Oil and Gas Reserves: The SEC Reporting Rules, Denver (January 2014)
- Colorado School of Mines Unconventional Reservoir Engineering Project workshop. CSM, Golden, (November 2012)
- EOR technology workshop. Schlumberger, Abu Dhabi (March 2012)
- Shale gas essentials. Schlumberger, Abu Dhabi (Feb 2011)
- New technology workshop on production engineering. Schlumberger (Feb 2011)
- OCEAN fundamentals course. Schlumberger, Abingdon (Aug 2010)

- Advanced coupled geo-mechanical fluid flow simulation (for fault- & fracture-reactivation, subsidence, compaction, and cap-rock integrity studies), Schlumberger, Bracknell, UK (Oct 2009)
- System Administration for Eclipse, Schlumberger, Abingdon UK (Nov 2008)
- PVT Toolbox Workshop, Schlumberger, Gatwick, UK (Oct 2008)
- Software Project Management, Construx, Abingdon UK (Oct 2008)
- Petrel Reservoir Engineering, Schlumberger, Abingdon, UK (Oct 2008)
- Uncertainty and Well Engineering Workshop, Schlumberger, Oxford (Oct 2008)
- Presentation Skills, Construx, Abingdon, UK (Jun 2008)
- Parallel Programming, Imperial College, London, UK (Mar 2008)
- Mid-career PE/RE hire orientation, Schlumberger, Abingdon, UK (Oct 2006)
- Thermally managed flowlines engineering, DeepStar Consortium, London (Feb 2006)
- Deepwater Petroleum Systems, SEG/EAGE Distinguished Lecturer Prof Paul Weimer, Denver, Colorado (Jul 2005)
- Petroleum Resource and Safety Management Issues, Norwegian International Programme for Petroleum Management and Administration (PETRAD) (Dec 1996)
- Investment Strategy and Privatization, Prof Michael Robinson of Univ. of Calgary (Nov 1996)
- Production Engineering for Wet Gas Wells, Adams Pearson Associates Inc. (Jun 1996)
- Gas and Gas-condensate Well Testing, SPE Distinguished Lecturer Dr. Roberto Aguilera, SERVIPETROL Ltd (Feb 1996)
- Industrial field training within several mining industries in India (as part of Curriculum): Gold Mine, Karnataka (1 month – 1993.7); Underground Coal Mine, Jharkhand (1 month – 1993.6); Copper and Chalcopyrite mine, Uttarakhand (1 month – 1992.7), Surface Coal Mine, Bihar (1 month – 1992.6).

SUMMARY OF INDUSTRY SKILLS
- Skilled user of or familiar with
    - Reservoir simulation suite: INTERSECT, ECLIPSE, IMEX, IPM, Gap, SENSOR
    - Reservoir modeling and engineering suite: PETREL, Builder, Sage, Lynx, TecPlot
    - Thermodynamics modeling: PVTi, PVTP, WinProp
    - Well-test interpretation: Saphir, ADVANTA
    - History-matching and uncertainty modeling: GenOpt, MEPO, Crystal Ball
    - Pipeline, surface facility and network modeling: PROSPER, PIPESIM, Builder
    - Geomechanical stress simulation suite: VISAGE
    - Data management and analysis: Spotfire
    - Geostatistical modeling: GSLIB

COMPUTING SKILLS

- Strong skills in programming with Fortran, MATLAB, Mathematica, C, C++
- Good command in computational fluid dynamics techniques, and linear and non-linear solvers
- Good command of MS Windows, Linux, Unix, LSF
- Familiar with parallel computation (PETSc)
- Professional software expertise: finite element software: ANSYS, computer algebra systems: MAPLE

PROFESSIONAL AFFILIATION

Society of Petroleum Engineers (SPE) 10+
Society of Industrial and Applied Mathematics (SIAM - currently discontinued)
American Association Petroleum Geologists (AAPG - currently discontinued)
Society of Exploration Geologists (SEG - currently discontinued)

VOLUNTEER ACTIVITIES

- Served as Secretary, Board of Post-graduate Studies, Department of Petroleum and Mineral Resources Engineering, Bangladesh University of Engineering and Technology
- Served as technical reviewer for Journal of Petroleum Science and Engineering and Computers and Geosciences

LANGUAGES

English, Bengali (Native fluency); French, Hindi (Limited proficiency)

AWARDS AND HONORS

- Canadian International Development Agency Scholarship, University of Alberta, Canada (1997 – 2003)
- Offshore Mechanics and Engineering Scholarship, University of Alberta, Canada (1999)
- CCG Studentship, University of Alberta, Canada (1999 – 2002)
- Academic 1st position in Science division, Notre Dame College, Dhaka, Bangladesh, 1989
- Academic 1st position St Joseph High School, Dhaka, Bangladesh in Secondary Certificate Examination, 1987