

## BRIEF CV



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**Areas of interest:** Oilfield scaling

### Academic Qualification:

- Ph. D, University of Canterbury, 2012, Mechanical Engineering, Geothermal scaling.
- M.Sc., University of Minnesota, 2007, Mechanical Engineering.
- B.Sc., University of Minnesota, 2006, First Class, Mechanical Engineering.

### Professional Qualification/ Membership/ Affiliation:

- Graduate Member, Board of Engineer (BEM), Malaysia

### Appointments:

- Senior Lecturer, Dept. of Mechanical and Manufacturing Engineering, UPM, 2013 to date
- Tutor, Dept. of Mechanical and Manufacturing Engineering, UPM, 2006-2012

### Area of interests :

- Oilfield scaling

### Student Supervision

Final Year Projects:

- Muhammad Khairul Anuar Bin Salim, “Numerical modeling of Calcium Carbonate ( $\text{CaCO}_3$ ) scaling in petroleum industry”, on going
- Mohd Edman Bin Mohd Suleiman, “Numerical modeling of Barium Sulfate ( $\text{BaSO}_4$ ) scaling in petroleum industry”, on going

### Publications:

Journals:

- **S. Masuri**, K.K. Tamma, X. Zhou, and M. Sellier. GS4-1 Computational Framework for Heat Transfer Problems: Part 1-Linear Cases with Illustration to Thermal Shock Problem, *Numerical Heat Transfer Part B – Fundamentals*. 62 (2-3):141-156. 2012.
- **S. Masuri**, K.K. Tamma, X. Zhou, and M. Sellier. GS4-1 Computational Framework for Heat Transfer Problems: Part 2-Extension to Nonlinear Cases with Illustration to Radiation Heat Transfer Problem. *Numerical Heat Transfer Part B – Fundamentals*. 62(2-3):157-180. 2012.
- V.M. Wheeler, **S. Masuri**, K.K. Tamma, X. Zhou, and M. Sellier. On the Applicability of an Isochronous Integration Framework for Parabolic/Hyperbolic Heat Conduction Type Problems. *Numerical Heat Transfer Part A-Applications*. 62(5): 372-392. 2012.
- **S. Masuri**, M. Sellier, X. Zhou, and K.K. Tamma. Design of Order-Preserving Algorithms for Transient First-Order Systems with Controllable Numerical Dissipation. *International Journal for Numerical Methods in Engineering*, 88:1411 - 1448, 2011.
- **S. U. Masuri**, A. Hoitink, X. Zhou, and K. K. Tamma. Algorithms by design: A new normalized time-weighted residual methodology and design of a family of energy–momentum conserving algorithms for non-linear structural dynamics, *International Journal for Numerical Methods in Engineering*, 79(9):1094–1146. 2009.

- **S. Masuri** , A. Hoitink , X. Zhou & K. K. Tamma. Algorithms by Design: Part III—A Novel Normalized Time Weighted Residual Methodology and Design of Optimal Symplectic-Momentum Based Controllable Numerical Dissipative Algorithms for Nonlinear Structural Dynamics, *International Journal for Computational Methods in Engineering Science and Mechanics*, 10:1, 57-90, 2009
- **S. Masuri** , A. Hoitink , X. Zhou & K. K. Tamma. Algorithms by Design: Part II—A Novel Normalized Time Weighted Residual Methodology and Design of a Family of Symplectic-Momentum Conserving Algorithms for Nonlinear Structural Dynamics, *International Journal for Computational Methods in Engineering Science and Mechanics*, 10:1, 27-56, 2009.
- A. Hoitink, **S. Masuri**, X. Zhou, and K. K. Tamma. Algorithms by Design: Part I—On the Hidden Point Collocation Within LMS Methods and Implications for Nonlinear Dynamics Applications. *International Journal for Computational Methods in Engineering Science and Mechanics*, 9:383–407, 2008.

Book chapter:

- K. K. Tamma, M. Shimada, X. Zhou, A. Hoitink, **S. U. Masuri**, and J. Har. Time Discretization of Equations of Motions: Recent Advances. In J. Har and K. Tamma, *Advances in Computational Dynamics of Particles, Materials and Structures* (553-668). John Wiley and Sons. 2012.

Encyclopedia articles:

- **S. Masuri** and K.K. Tamma. An Isochronous GS4 Time Integrator for First/Second Order System and Application to Thermomechanical Problem. *Encyl. Thermal Stresses*. Springer Publishers. 2013 (to appear); id: 00762.
- **S. Masuri** and K.K. Tamma. Application of GS4-1 Time Integrator to Nonlinear Heat Transfer Problem. *Encyl. Thermal Stresses*. Springer Publishers. 2013 (to appear); id: 00760.
- **S. Masuri** and K.K. Tamma. Time Integration and Selective Control Features: Transient Heat Conduction. *Encyl. Thermal Stresses*, Springer Publishers. 2013 (to appear); id: 00759.

Conferences:

- **S. Masuri**, K. Brown, and M. Sellier. Numerical Studies of Silica Colloids Deposition: Effects of Flow and Physicochemical Parameters on Rate of Deposition. *US-NZ Joint Geothermal Workshop 2012*, Rotoroa, New Zealand, 16-20 April 2012.
- **S. Masuri**, M. Sellier, K. Brown, and M. Rock. Numerical Model of Silica Colloids Deposition. *2011 Biennial New Zealand Geochemical & Mineralogical Society (NZGeMS) and 4<sup>th</sup> meeting of the Stable Isotope Network for New Zealand (SINNZ) Joint Conference*, Christchurch, New Zealand, 16-18 November 2011.
- **S.U. Masuri**, V. Wheeler, M. Sellier, X. Zhou, and K.K. Tamma. A Unified Order Preserving Framework for Integrating First/Second Order Parabolic/Hyperbolic Systems. *11<sup>th</sup> US National Congress on Computational Mechanics (USNCCM11)*, Minneapolis, USA, 25-29 July 2011.
- **S. Masuri** and M. Sellier. Solving time-dependent engineering problems: GS4-1, a new solver for first order system with optimal properties. *1<sup>st</sup> National Postgraduate Research Conference (INPRC)*, Dunedin, New Zealand, 1 July 2011.
- **S.U. Masuri**, M. Sellier, X. Zhou, and K.K. Tamma. GS4-1, a new time integrator with selective control of high frequency damping for integrating first order transient systems, *16<sup>th</sup> International Conference on Finite Elements in Flow Problems (FEF2011)*, Munich, Germany, 23-25 March 2011.