



# Gnanasekaran N

## Curriculum Vitae

### Education

- 2008–2012 Ph.D., Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai, India.
- 2004–2006 Master of Engineering in Thermal Engineering, Department of Mechanical Engineering, Government College of Technology, Coimbatore, India.
- 1998–2002 Bachelor of Engineering, Department of Mechanical Engineering, Shri Angalamman College of Engineering and Technology, Trichy, India.

### Thesis information

- Title "A Bayesian Approach for Multiparameter Estimation using Heat Transfer Experiments"
- Advisor Prof. C. Balaji, Department of Mechanical Engineering, Indian Institute of Technology Madras

### Experience

- August, 2013 - till date Assistant Professor, Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, Mangalore, India

### Miscellaneous

- Awards Best paper award for the project titled "Numerical Estimation of Wall Heat Flux in a One Dimensional Rectangular Fin by Conjugate Gradient Method", International Conference on Systems, Energy and Environment held at Government College of Engineering Kannur during 5-6 August 2016
- Abroad Trip June, 2015 - Research interaction with Prof. James V Beck, Michigan State University, United States.
- Abroad Trip August, 2014 - Presented a paper at International Heat Transfer Conference held in Kyoto, Japan (IHTC-15).
- Abroad Trip August, 2010 - Presented a paper at International Heat Transfer Conference held at Washington, United States of America (IHTC-14).
- Paper presentation Presented paper in Indian Society for Heat and Mass Transfer held at IIT Bombay

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- NPTEL Video Assisted Prof.C.Balaji for his NPTEL lectures on “Essentials of Thermal System Design and Optimization”  
Assisted Prof.C.Balaji for his NPTEL lectures on “Conduction and Radiation”(to be released shortly)
- Online video Assisted Prof.C.Balaji for his online video lecture on “**The Joy of Teaching**”
- Book Assisted Prof.C.Balaji for his book on “Essentials of Thermal System Design and Optimization”  
Assisted Prof.C. Balaji for his book on “The Joy of Teaching”
- Conference Actively participated in organising ISHMT-ASME Heat and Mass Transfer Conference held during Dec 27-30, 2011, IIT Madras, India.

## Publications

- Journal **Gnanasekaran, N.** and Balaji, C., 2010, “An Inexpensive Technique to Simultaneously Determine Total Emissivity and Natural Convection Heat Transfer Coefficient from Transient Experiments”, *Experimental Heat Transfer*, 23: 3, 235 - 258
- Gnanasekaran, N.** and Balaji, C., 2011, “A Bayesian approach for the simultaneous estimation of surface heat transfer coefficient and thermal conductivity from steady state experiments on fins”, *International Journal of Heat and Mass Transfer* 54, 3060-3068
- Gnanasekaran, N.** and Balaji, C., 2011, “A correlation for Nusselt number under turbulent mixed convection using transient heat transfer experiments”, *Frontiers in Heat and Mass Transfer*, 2, 023008.
- Gnanasekaran, N.** and Balaji, C., 2012, “Markov Chain Monte Carlo (MCMC) approach for the determination of thermal diffusivity using transient fin heat transfer experiments”, *International Journal of Thermal Sciences*, 63, 46 -54
- Konda reddy, B., **Gnanasekaran, N.**, and Balaji, C., 2012, “Estimation of thermo-physical and transport properties with Bayesian inference using transient liquid crystal thermography experiments ”, *Journal of Physics Conference Series* 2012, Vol 395, 012-082
- Amey S Kulkarni , Harsha Kumar, **Gnanasekaran N.**, A new Forward model approach for a mild steel fin under natural convection heat transfer, *Procedia Engineering* 127, 317-324, 2015
- Shreyas Hegde, Narendran G, **Gnanasekaran N.**, Conjugate Heat Transfer Studies in a Hexagonal Micro Channel, *Procedia Engineering* 127, 719-726, 2015.
- Sharath Kumar, Harsha Kumar, **Gnanasekaran N.**, A Neural Network based Method for the Estimation of Heat Generation from a Teflon Cylinder, *Frontiers in Heat and Mass Transfer*, 7, 15 (2016)
- International Conferences **Gnanasekaran, N.** and Balaji C., 2010, “Estimation of Multiple Parameters in Transient Cooling using Bayesian Method”, 20th National and 9th International ISHMT ASME Heat and Mass Transfer Conference, Mumbai, (ISHMT ASME 2010).

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**Gnanasekaran N.** and Balaji, C., 2010, "A Correlation for Nusselt Number under Turbulent Mixed Convection using Transient Heat Transfer Experiments" 14th International Heat Transfer Conference - IHTC, Washington D.C.

Konda reddy, B., **Gnanasekaran, N.**, and Balaji, C., 2011, "Simultaneous estimation of multiple parameters with Bayesian inference based on liquid crystal thermography data", ISHMT-ASME Heat and Mass Transfer Conference, December 27-30, IIT Madras, India.

Konda reddy B, **Gnanasekaran N** and Balaji C, "Simultaneous Estimation of Thermo-physical and Transport Properties with Bayesian Inference using Transient Liquid Crystal Thermography Experiments ", EURO THERM, 6<sup>th</sup> European Thermal Sciences Conference Eurotherm 2012, Poitiers - Futuroscope France

**Gnanasekaran N.**, Nithin and Balaji, C., 2014, "Parameter Estimation Using Heat Transfer Models with Experimental Data Using a Combined Ann-Bayesian Approach" 15th International Heat Transfer Conference - IHTC-15, Kyoto, Japan

Srinivasa Sagar, N., **Gnanasekaran, N.**, 2014, "Estimation of Heat Flux Under Natural Convection Laminar Flow", 5<sup>th</sup> International and 41<sup>st</sup> National Conference on Fluid Mechanics and Fluid Power, FMFP 2014, IIT Kanpur.

Harsha Kumar, Sharath Kumar, Srinivasa Sagar, N., **Gnanasekaran N.**, 2014, "Hybrid Monte Carlo Approach for Estimation of Heat Flux From Perturbed Temperature Data", 23<sup>rd</sup> International Conference on Interdisciplinary Mathematical, Statistical and Computational Technique, IMSCT 2014-FIMXXIII, NITK.

Harsha Kumar, Sharath Kumar, Srinivasa Sagar, N., **Gnanasekaran N.**, 2014, "Asymptotic Computational Fluid Dynamics (ACFD) - A Novel Approach as Forward Model for Estimation of Volumetric Heat Generation Using Surrogated Data", 23<sup>rd</sup> International Conference on Interdisciplinary Mathematical, Statistical and Computational Technique, IMSCT 2014-FIMXXIII, NITK.

Harsha Kumar, Sharath Kumar, Srinivasa Sagar, N., **Gnanasekaran N.**, 2015, Synergistic Approach for the Simultaneous Estimation of Heat Transfer Coefficient and Heat Flux Using Fin from Steady State Heat Transfer Experiments, 6<sup>th</sup> International Symposium on Advances in Computational Heat Transfer, CHT-15, Rutgers University, U.S.A

Amey S Kulkarni, Harsha Kumar, **Gnanasekaran N.**, 2015, A new Forward model approach for a mild steel fin under natural convection heat transfer, International Conference on Computational Heat and Mass Transfer-2015, National Institute of Technology Warangal, November 30 to December 2, 2015

Shreyas Hegde, Narendran G, **Gnanasekaran N.**, 2015, Conjugate Heat Transfer Studies in a Hexagonal Micro Channel, International Conference on Computational Heat and Mass Transfer-2015, National Institute of Technology Warangal, November 30 to December 2, 2015.

Harsha Kumar, Amey S Kulkarni, **Gnanasekaran N.**, 2015, Estimation of heat transfer coefficient from mild steel fin using inverse heat transfer approach, International Conference on Computer Aided Engineering (CAE-2015) Department of Mechanical Engineering, GITAM University, School of Technology, Hyderabad, India

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Sai Krishna Dammalapati, Vishal Murmu, **Gnanasekaran N.**, 2015, Bayesian Inference Approach to Estimate Robin Coefficient using Metropolis Hastings Algorithm, International Conference on Advances in Chemical Engineering and Golden Jubilee Celebrations between 20 to 22 December 2015, National Institute of Technology Karnataka

Narendran G, **Gnanasekaran N**, Arumuga Perumal D, 2016, A review on fluid flow and heat transfer characteristics of Micro channel heat sink, International Conference on Design, Analysis, Manufacturing and Simulation, April 7 - 8, 2016, Saveetha University, Chennai.

Balaji S and **Gnanasekaran N**, "Numerical Estimation of Wall Heat Flux in a One Dimensional Rectangular Fin by Conjugate Gradient Method", International Conference on Systems, Energy and Environment held at Government College of Engineering Kannur during 5-6 August 2016

Bhargav Sriram, Sravan S and **Gnanasekaran N**, "Numerical estimation of heat flux and convective heat transfer coefficient in a one dimensional rectangular plate by Levenberg-Marquardt method", International Conference on Systems, Energy and Environment held at Government College of Engineering Kannur during 5-6 August 2016

National Conferences Pallav Pattnaik, Subham Burnwal, **Gnanasekaran N.**, 2015, A Novel Method to Estimate Convective Heat Transfer Coefficient and Emissivity from a Lumped System Using Transient, 10<sup>th</sup> National Conference on Optimization Techniques in Engineering Sciences and Technologies (OPTTEST 2015), BIT, Erode, TamilNadu, India.

Suyog Wani, Shiv Singh Saini, **Gnanasekaran N.**, 2015, A New Methodology to Estimate Unknown Parameter From Fin Heat Transfer, 10<sup>th</sup> National Conference on Optimization Techniques in Engineering Sciences and Technologies (OPTTEST 2015), BIT, Erode, TamilNadu, India.

## Sports

Ball Represented state level tournament during school days. Represented Tamil Nadu Inter  
Badminton Engineering Sports during Bachelor of Engineering, Played Zonal level tournaments during Master of Engineering  
Volley Ball Runner in Schroetter IIT Madras, 2010

## Personal information

Date of Birth May 1, 1981

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