



## SHORT BIO

Native of Hyderabad. Schooling and graduation from Hyderabad. Padma Sri Dr. B. V. Raju Memorial best merit student during UG. Project Intern at Nuclear Fuel Complex, Department of Atomic Energy, Hyderabad. Was a member of Toastmasters International. Active participant in department events. Interested in teaching and research.

Interested in research areas of catalysis, combustion and energy conversion, reaction kinetics, reactor design and optimal operation, model development, flow and reaction behavior.

## CURRENT RESEARCH

Current research is about granular flows and mechanics for application in industrial equipment and unit operations.

## CONTACT

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# NEHA.Y

Post-Doctoral Fellow

Chemical Engineering

Indian Institute of Science, Bangalore



## EDUCATION

**Ph.D., Chemical Engineering**  
**Indian Institute of Technology, Madras**

July 2015 – June 2021

Thesis title: Heat recirculating microreactors for enhanced combustion, and their integration with thermoelectrics for power generation

Thesis Advisor: Prof. Niket S. Kaisare

**B. Tech, Chemical Engineering**  
**Chaitanya Bharathi Institute of Technology, Hyderabad**

August 2011 – May 2015

## WORK EXPERIENCE AND FELLOWSHIPS

**Research associate, Indian Institute of Technology Madras**

February 2021 – November 2021

Worked towards development of a kinetic model for selective catalytic reduction of NO<sub>x</sub>, which is one of ways to reduce automotive emissions.

## SELECTED PUBLICATIONS

N. Yedala, A. K. Raghu, and N. S. Kaisare, "A 3D CFD study of homogeneous-catalytic combustion of hydrogen in a spiral microreactor," *Combust. Flame*, vol. 206, pp. 441–450, 2019.

N. Yedala and N. S. Kaisare, "Modeling of thermal integration of a catalytic microcombustor with a thermoelectric for power generation applications," *Ener. Fuels*, vol. 35, pp. 5141-5152.

N. Yedala and N. S. Kaisare, "Integration of heat recirculating microreactors with thermoelectric modules for power generation: A comparative study using CFD," *React. Chem. Eng.*