Dr. Chetan (Assistant Professor)

School of Mechanical Sciences, IIT Bhubaneswar, India

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EDUCATION

Ph.D., Mechanical Engineering September 2018

Indian Institute of Technology Delhi New Delhi, India

- Research Interests: Metal Cutting
- Dissertation: "Machining of Nimonic 90 using sustainable techniques and modeling for the specific energy"

M. Tech., Production Engineering May 2013

Indian Institute of Technology Delhi New Delhi, India

- Dissertation: "Mathematical Modeling of Tool Wear During Machining of Titanium Alloy (Ti6Al4V)"

PGDM, Management studies July 2010

Edexcel UK London, UK

B. Tech., Mechanical Engineering May 2009

Beant College of Engineering and Technology Gurdaspur, Punjab, India

(Government Institute Affiliated to IKG PTU, Jalandhar, Punjab, India)

- Dissertation: "Design and Fabrication of Downdraft type Gasifier"

GRANTS AND HONORS

Distinction in B.Tech	May 2009
Tribology International (Outstanding contribution in reviewing)	August 2017
Journal of Cleaner Production (Outstanding contribution in reviewing)	October 2016

INTERNATIONAL JOURNAL PAPERS

1. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2019**, Comparison between sustainable cryogenic techniques and nano-MQL cooling mode in turning of nickel-based alloy, **Journal of Cleaner Production**, 231:1036-1049.
2. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2018**, Specific cutting energy modeling for turning nickel-based Nimonic 90 alloy under MQL condition, **International Journal of Mechanical Sciences**, 146-147:25-38.
3. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2017**, Performance evaluation of deep cryogenic processed carbide inserts during dry turning of Nimonic 90 aerospace grade alloy, **Tribology International**, 115:397-408.
4. **Chetan**, Bikash Behera, Sudarsan Ghosh, and P Venkateswara Rao: **2016**, Wear behavior of PVD TiN coated carbide inserts during machining of Nimonic 90 and Ti6Al4V superalloys under dry and MQL conditions, **Ceramic International**, 42:14873-14885.
5. **Chetan**, Bikash Behera, Sudarsan Ghosh, and P Venkateswara Rao: **2016**, Application of nanofluids during minimum quantity lubrication: A case study in turning process, **Tribology International**, 101:234-246.
6. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2016**, Environment friendly machining of Ni–Cr–Co based super alloy using different sustainable techniques, **Materials and Manufacturing Processes**, 31(7): 852- 859.
7. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2015**, Application of sustainable techniques in metal cutting for enhanced machinability: a review, **Journal of Cleaner Production**, 100: 17- 34.
8. **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2014**, Study of tool wear mechanisms and mathematical modeling of flank wear during machining of Ti alloy (Ti6Al4V), **Journal of Institute of Engineers India Series C**, 96(3): 279- 285.
9. Bikash Behera, **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2017,** Spreadability studies of metal working fluids on tool surface and its impact on minimum amount cooling and lubrication turning, **Journal of Materials Processing Technology**, 244: 1-16.
10. Bikash Behera, **Chetan**, Sudarsan Ghosh, and P Venkateswara Rao: **2018**, Study of saw tooth chip in machining of Inconel 718 by metallographic technique, **Accepted for publication in Machining Science and Technology**.

PEER REVIEWED CONFERENCE PAPERS

1. **Chetan**, Sudarsan Ghosh, P Venkateswara Rao: 2017, Machining of Nickel based Nimonic 90 aerospace grade alloy with carbide inserts using sustainable techniques, Presented In **39th MATADOR**, **The University of Manchester**, Manchester, United Kingdom.
2. **Chetan**, Bikash Behera, Habtamu Alemayehu, Sudarsan Ghosh, P Venkateswara Rao: **2017**, Machining of Nimonic 90 Alloy Under Dry and LN_2 Environment Using AlTiN Coated and Uncoated Tungsten Carbide Inserts, **(COPEN-10)**, **IIT Madras**, Tamil Nadu, India.
3. Bikash Behera, **Chetan**, Habtamu Alemayehu, Sudarsan Ghosh, P Venkateswara Rao: 2017, Tribological Behavior of Inconel 718 and Carbide Tools under nMQL Environment, **COPEN-10**, **IIT Madras**, Tamil Nadu, India.
4. **Chetan**, Sudarsan Ghosh, P Venkateswara Rao: **2016**, Investigations on Tool Wear, Cutting Forces and Surface Finish during Machining of Ni Based Alloy under Dry and Nano MQL Mode Using Different Nose Radius Carbide Inserts, **AIMTDR-2016, COEP**, Pune, India.
5. **Chetan**, Sudarsan Ghosh, P Venkateswara Rao: **2015**, Sustainable Machining of Nimonic 90 aerospace super alloy using vegetable oils and Nano fluid under MQL mode, **COPEN-9**, **IIT Bombay**, Maharashtra, India.
6. **Chetan**, Bikash Behera, Sudarsan Ghosh, P Venkateswara Rao: **2014**, Effect of Direct and Indirect Cryogen Application Methods on the Turning Forces, Tool Wear and Surface Finish of a Nickel Based Alloy (Nimonic 90), **AIMTDR-2014**, **IIT Guwahati**, Guwahati, India.
7. Bikash Behera, **Chetan**, Sudarsan Ghosh, P Venkateswara Rao: **2014,** Effects on Forces and Surface Roughness during Machining Inconel 718 alloy using Minimum Quantity Lubrication, **AIMTDR-2014**, **IIT Guwahati**, Guwahati, India.

TEACHING EXPERIENCE

- **Assistant Professor**, School of Mechanical Sciences, IIT Bhubaneswar, Dec 2019- Till date
- **Assistant Professor**, Department of Mechanical Engineering, IIITD&M Kancheepuram, Jul 2019 – Dec 2019

- **Contractual Faculty**, Department of Mechanical Engineering, PEC Chandigarh, Aug 2018-Jul 2019

REVIEWER

- Journal of Cleaner Production
- Tribology International
- Journal of Manufacturing Processes
- Journal of Advanced Manufacturing System
- Journal of Engineering Manufacture (Sage)