N.Arunachalam

IIT Madras

Prognostics and health managment

	All	Since 2015
Citations	262	242
h-index	8	8
i10-index	6	6

TITLE	CITED BY	YEAR
Grindability studies of thermomechanically processed advanced high strength steel using sol-gel and fused alumina grain-based grinding wheels HSR Magham, L Vijayaraghavan, S Sankaran, N Arunachalam Proceedings of the Institution of Mechanical Engineers, Part B: Journal of …	1	2020
HIGHLY ADHESIVE CVD GROWN BORON DOPED DIAMOND GRADED LAYER ON WC-CO K Ramasubramaniyan, N Arunachalam, R Rao US Patent App. 16/608,790		2020
Investigation on the effect of EDM process variables and environments on acoustic emission signals R Dwaraka, N Arunachalam Machining Science and Technology, 1-25	2	2020
Image Data-Based Surface Texture Characterization and Prediction Using Machine Learning Approaches for Additive Manufacturing V Akhil, G Raghav, N Arunachalam, DS Srinivas Journal of Computing and Information Science in Engineering 20 (2)	3	2020
Investigations on ductility improvement and reloading yielding during stress relaxation of dual phase Ti–6Al–4V titanium alloy K Prasad, H Krishnaswamy, N Arunachalam Journal of Alloys and Compounds, 154450	2	2020
A comprehensive investigation on the effect of flood and MQL coolant on the machinability and stress corrosion cracking of super duplex stainless steel J Rajaguru, N Arunachalam Journal of Materials Processing Technology 276, 116417	3	2020
Electrophoretic deposited graphene based functional coatings for biocompatibility improvement of Nitinol M Mallick, N Arunachalam Thin Solid Films 692, 137616	2	2019
Effect of graphene nano-platelet addition on the microstructure and spark plasma sintering kinetics of zirconium diboride N Shanbhog, K Vasanthakumar, N Arunachalam, SR Bakshi International Journal of Refractory Metals and Hard Materials 84, 104979		2019
Understanding galling wear initiation and progression using force and acoustic emissions sensors VV Shanbhag, BF Rolfe, JM Griffin, N Arunachalam, MP Pereira Wear 436, 202991	7	2019
Effect of multi stage abrasive slurry jet polishing on surface generation in glass KG Anbarasu, L Vijayaraghavan, N Arunachalam Journal of Materials Processing Technology 267, 384-392	1	2019

TITLE	CITED BY	YEAR
Wear performance of nano-engineered boron doped graded layer CVD diamond coated cutting tool for machining of Al-SiC MMC K Ramasubramanian, N Arunachalam, MSR Rao Wear 426, 1536-1547	10	2019
Evaluation and characterization of deterministic laser textured surfaces using machine vision P Sreedath, S Bhat, N Arunachalam Measurement 135, 537-546	2	2019
A digital twin for grinding wheel: an information sharing platform for sustainable grinding process K Kannan, N Arunachalam Journal of Manufacturing Science and Engineering 141 (2)	19	2019
Illumination compensated images for surface roughness evaluation using machine vision in grinding process JG John, N Arunachalam Procedia Manufacturing 34, 969-977	3	2019
Journal of the Mechanical Behavior of Biomedical Materials J Tian, G Huang, M Lin, J Qiu, B Sha, TJ Lu, F Xu Journal of the Mechanical Behavior of Biomedical Materials 93, 213-221	2	2019
Investigation of Stamping Tool Wear Initiation at Microscopic Level Using Acoustic Emission Sensors VV Shanbhag, BF Rolfe, N Arunachalam, MP Pereira Key Engineering Materials 794, 285-294	1	2019
Evaluation of grinding strategy for bioceramic material through a single grit scratch test using force and acoustic emission signals N Arunachalam, L Vijayaraghavan Journal of Manufacturing Processes 37, 457-469	1	2019
Investigating galling wear behaviour in sheet metal stamping using acoustic emissions VV Shanbhag, BF Rolfe, N Arunachalam, MP Pereira Wear 414, 31-42	17	2018
Physical insights about magnetic flux distribution and its effect on surface roughness in MR fluid based finishing process T Aravind, N Arunachalam, AX Kennedy Materials Research Express 6 (1), 016104	3	2018
Effect of grinding on subsurface modifications of pre-sintered zirconia under different cooling and lubrication conditions PSP Anand, N Arunachalam, L Vijayaraghavan Journal of the mechanical behavior of biomedical materials 86, 122-130	6	2018
Investigation on machining induced surface and subsurface modifications on the stress corrosion crack growth behaviour of super duplex stainless steel J Rajaguru, N Arunachalam Corrosion Science 141, 230-242	12	2018

TITLE	CITED BY	YEAR
Study on grinding of pre-sintered zirconia using diamond wheel PSP Anand, N Arunachalam, L Vijayaraghavan Materials and Manufacturing Processes 33 (6), 634-643	3	2018
Understanding the source of acoustic emission signals during the wear of stamping tools VV Shanbhag, BF Rolfe, N Arunachalam, MP Pereira IOP Conference Series: Materials Science and Engineering 418 (1), 1-8	3	2018
Experimental study on surface generation in optical glass with fluid jet polishing process KG Anbarasu, L Vijayaraghavan, N Arunachalam International Journal of Abrasive Technology 8 (3), 245-260		2018
Multi-Sensor Data Analytics for Grinding Wheel Redress Life Estimation-An Approach towards Industry 4.0 K Kannan, N Arunachalam, A Chawla, S Natarajan Procedia Manufacturing 26, 1230-1241	3	2018
Performance analysis of nano engineered diamond coated tools for machining of AA2124/SiCp composite material K Ramasubramanian, N Arunachalam, MSR Rao Procedia Manufacturing 26, 424-433	2	2018
Performance comparison of sol-gel with white alumina abrasives for grinding of super duplex stainless steel (SDSS) D Selvakumaran, N Arunachalam, L Vijayaraghavan, ASS Balan Procedia Manufacturing 26, 1448-1458	5	2018
Tool wear prediction in end milling of Ti-6Al-4V through Kalman filter based fusion of texture features and cutting forces K Tiwari, A Shaik, N Arunachalam Procedia Manufacturing 26, 1459-1470	4	2018
Investigation on non-invasive process monitoring of die sinking EDM using acoustic emission signals R Dwaraka, N Arunachalam Procedia Manufacturing 26, 1471-1482	1	2018
Grinding wheel redress life estimation using force and surface texture analysis K Kannan, N Arunachalam Procedia CIRP 72, 1439-1444	6	2018
A study on CVD diamond coated cutting tools wear performance using vibration and acoustic emission signals K Ramasubramanian, N Arunachalam, MSR Rao Procedia CIRP 72, 1415-1420	5	2018
Investigation on tribological behaviour of boron doped diamond coated cemented tungsten carbide for cutting tool applications K Ramasubramanian, N Arunachalam, MSR Rao Surface and Coatings Technology 332, 332-340	8	2017

TITLE	CITED BY	YEAR
Performance of diamond and silicon carbide wheels on grinding of bioceramic material under minimum quantity lubrication condition P Suya Prem Anand, N Arunachalam, L Vijayaraghavan Journal of Manufacturing Science and Engineering 139 (12)	8	2017
Development of an Internet of Things enabled manufacturing system for tool wear characterization BT Kumaravel, R Bhattacharyya, J Siegel, SE Sarma, N Arunachalam 2017 IEEE 3rd International Symposium in Robotics and Manufacturing …	1	2017
Classification of rice grain varieties arranged in scattered and heap fashion using image processing S Bhat, S Panat, N Arunachalam Ninth International Conference on Machine Vision (ICMV 2016) 10341, 1034126	3	2017
Time series analysis of tool wear in sheet metal stamping using acoustic emission VV Shanbhag, PM Pereira, FB Rolfe, N Arunachalam Journal of Physics: Conference Series 896 (1), 1-8	5	2017
Coated tool performance in dry turning of super duplex stainless steel J Rajaguru, N Arunachalam Procedia manufacturing 10, 601-611	27	2017
Investigation on grindability of medical implant material using a silicon carbide wheel with different cooling conditions PSP Anand, N Arunachalam, L Vijayaraghavan Procedia Manufacturing 10, 417-428	8	2017
Surface Roughness Inspection of Ground Components using Statistical Texture Parameters of Images—A Machine Vision Approach JG John, N Arunachalam		2016
Grinding behavior of yttrium partially stabilized zirconia using diamond grinding wheel P Anand, N Arunachalam, L Vijayaraghavan Advanced Materials Research 1136, 15-20	6	2016
Analytical model to predict Sauter mean diameter in air assisted atomizers for MQL in machining application EL Chidambaram, N Arunachalam, L Vijayaraghavan Procedia Cirp 37, 117-121	6	2015
Prognostics model for tool life prediction in milling using texture features of surface image data KT Kumar, N Arunachalam, L Vijayaraghavan 2014 International Conference on Prognostics and Health Management, 1-5	1	2014
Assessment of grinding wheel conditioning process using machine vision N Arunachalam, L Vijayaraghavan 2014 International Conference on Prognostics and Health Management, 1-5	6	2014
A study on the minimum quantity lubrication in grinding of titanium alloy (Ti-6Al-4V) M Biswojyothi, ASS Balan, N Arunachalam, LA Vijayaraghavan Proceedings of the 5th International & 26th All India Manufacturing …	7	2014

TITLE	CITED BY	YEAR
A preliminary investigation on the application of air-coupled ultrasound to evaluate surface condition of the grinding wheel N Arunachalam, R AnandKumar, B Ramamoorthy International Journal of Abrasive Technology 4 (3), 266-278	1	2011
Localization of Partial Discharge in Model Transformer Tank using Acoustic Emission Technique N ARUNACHALAM The 2010 International Conference on Condition Monitoring and Diagnosis		2010
A Review on the Monitoring Methods for Condition Based Maintenance of On Load Tap Changer N Arunachalam, A Venkatasami, AB Bhatia		2010
Localization of Partial Discharge in Model Transformer Tank using Acoustic Emission N Arunachalam, A Venkatasami, AB Bhatia, BR Pagalavan, ...		2010
Fourier Transform based texture measures for grinding wheel condition monitoring using machine vision N Arunachalam, B Ramamoorthy International journal of manufacturing technology and management 21 (1-2 …	8	2010
EFFECT OF WATER-POWDER RATIO ON MECHANICAL PROPERTIES OF SELF-COMPACTING CONCRETE VS Bharathi, JV Ramasamy, N Arunachalam, S Sankaran Indian Journal of Engineering, Science, and Technology 1 (2), 47		2007
Texture analysis for grinding wheel wear assessment using machine vision N Arunachalam, B Ramamoorthy Proceedings of the Institution of Mechanical Engineers, Part B: Journal of …	37	2007
VISION BASED SURFACE ROUGHNESS EVALUATION OF GROUND COMPONENTS USING WAVELET TRANSFORM AND NEURAL NETWORK N Arunachalam, B Ramamoorthy XVIII Imeko World Congress, Metrology for a sustainable development	1	2006
Strategy for comparative surface roughness measurement for 3-D printed components using Machine Vision T Goel, K Bhat, N Arunachalam		