PROFILE

Professor in the Department of Production and Industrial Engineering, National Institute of Technology, with more than 20 years of teaching experience.

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AREA OF INTEREST

Industrial Engineering
Automation
CAD/CAM
Supply Chain Management

ADMINISTRATIVE POSTS HELD

Dean (Academics) **(Currently)**
Controller of Examination
CPIO (Institute's RTI Officer)
Associate Dean (Academics)
Head of Department
Professor-In-Charge (Academic Reforms)
Professor-In-Charge (Continuing Education Prog.)
Professor-In-Charge (Accreditation)
Coordinator (Training and Placement)

AMARESH KUMAR

Professor
Department of Production and Industrial Engineering
National Institute of Technology Jamshedpur

EDUCATION

Degree in Philosophy (Production Engineering)
2006
Jadavpur University, West Bengal, IN
Thesis Title: Some Aspects of Feature Based Modeling and Automatic Feature Recognition for Computer Aided Process Planning

Masters in Engineering (Mechanical Engineering (CIDM))
1996
National Institute of Technology Jamshedpur, Jharkhand, IN
Thesis Title: Some Aspects of Automatic Code Generation for Rotational Parts.

Bachelor of Engineering (Mechanical Engineering)
1993
Mysore University, Karnataka, IN

WORK EXPERIENCE

National Institute of Technology Jamshedpur |Professor
2018–Present

National Institute of Technology Jamshedpur | Associate Professor
2011–2018

National Institute of Technology Jamshedpur | Assistant Professor
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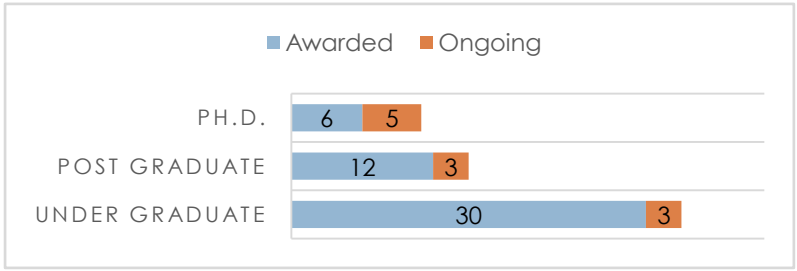
STUDENTSSUPERVISED



LIST OF PUBLICATIONS

Link to Publication Websites:

- ORCID: https://orcid.org/0000-0001-9106-5851
- Scopus: http://www.scopus.com/authid/detail.url?authorId=56445960000
- Web of Science/Publon/Researcher ID:http://www.researcherid.com/rid/AAB-1930-2019
- Google Scholar ID: http://scholar.google.co.in/citations?user=pD_mlpcAAAAJ
- ResearchGate ID:https://www.researchgate.net/profile/Amaresh_Kumar6

Journal Publication

1. Pravin Pawar, **Amaresh Kumar**, Raj Ballav (2020) "Grey Relational Analysis Optimization of Input Parameters for Electrochemical Discharge Drilling of Silicon Carbide by Gunmetal Tool Electrode", Annales de Chimie – Science des Materlaux, Vol. 44, No. 4, pp. 239-249, doi: https://doi.org/10.18280/acsm.440402(Scopus, ESCI)
2. Piyush Jaiswal, Amit Singh, Subhas C. Misra and **Amaresh Kumar** (2020), "Barriers in implementing Lean Manufacturing in Indian SMEs: a multi-criteria decision-making approach", Journal of Modelling in Management (In Print), doi: https://doi.org/10.1108/JM2-12-2019-0276(Scopus, ESCI)
3. Pravin Pawar, **Amaresh Kumar** and Raj Ballav (2020) "Experimental Study on The Mrr, Machined Depth and Hole Diameter for Soda-Lime Glass by Electrochemical Discharge Machining Process with Copper Tool", International Journal of Modern Manufacturing Technologies, Volume XII, No. 1/2020, 131-143. (ISSN: 2067-3604) (Scopus)
4. Pravin Pawar, **Amaresh Kumar** and Raj Ballav (2020) "Development Of 3d Models From 2d Drawings Of Electrochemical Discharge Machine", Machine Design, Vol. 12 (2020), No.1 7-14. (ISSN: 1821-1259) DOI: https://doi.org/10.24867/MD.12.2020.1.7-14(Non-Scopus, Non-paid)
5. Pravin Pawar, **Amaresh Kumar** and Raj Ballav (2019) "Parametric Analysis of Electrochemical Discharge Drilling on Soda-Lime Glass Material using Taguchi L27 Orthogonal Array Method", Strojnícky časopis - Journal of Mechanical Engineering, Volume 69, No. 4, 115-132, https://doi.org/10.2478/scjme-2019-0047(Scopus)
6. Pravin Pawar, **Amaresh Kumar** and Raj Ballav (2019) "Analysis of Machining for Silicon Carbide on Electrochemical Discharge Machining with Brass Tool", International Journal of Modern Manufacturing Technologies, Vol. XI, No. 1, 86-94, www.ijmmt.ro/vol9no22017/08_Pawar_Pravin.pdf(Scopus)
7. Piyush Jaiswal and **Amaresh Kumar** (2018) "Assessment of drivers to implement integrated lean green manufacturing system in Indian SMEs through IF-TOPSIS approach", International Journal of Management and Decision Making, Volume 17(2): 224-243, https://doi.org/10.1504/IJMDM.2018.092569(Scopus, ABDC)
8. Piyush Jaiswal and **Amaresh Kumar** (2018) "Prioritisation of barriers in implementation of green manufacturing in Indian SMEs through integrated grey-DEMATEL approach", International Journal of Manufacturing Technology and Management Volume 32(3): 215-236, https://dx.doi.org/10.1504/IJMTM.2018.091758(Scopus, ABDC)
9. Piyush Jaiswal, **Amaresh Kumar**, Sumit Gupta (2018) "Prioritization of green manufacturing drivers in Indian SMEs through IF-TOPSIS approach", UPB Scientific Bulletin, Series D:Mechanical Engineering, Volume 80(2), pp. 277-292, https://www.scientificbulletin.upb.ro/rev_docs_arhiva/full932_743610.pdf(Scopus)
10. P. Pawar, R. Ballav and **Amaresh Kumar** (2018) "Material removal analysis of soda-lime glass by using electrochemical discharge drilling process", Asian Journal of Chemistry, Volume 30(4), pp. 879-882 https://dx.doi.org/10.14233/ajchem.2018.21120(Scopus)
11. P. Pawar, R. Ballav and **Amaresh Kumar** (2018) "Development and manufacturing of arduino based electrochemical discharge machine", Journal of Machine Engineering, Volume 18(1), pp. 45-60, http://dx.doi.org/10.5604/01.3001.0010.8822(Scopus)
12. Pravin Pawar, Raj Ballav and **Amaresh Kumar** (2017) "Machining Processes of Silicon Carbide: A Review", Reviews on Advanced Materials Science, Volume 51, pp. 62-76. (SCIE)
13. Pawar Pravin, Raj Ballav, and **Amaresh Kumar** (2017) "Material removal and tool wear analysis by ECDM drilling of a mosaic ceramic material", International Journal of Modern Manufacturing Technologies, Volume 9(2), pp. 51-58, www.ijmmt.ro/vol9no22017/08_Pawar_Pravin.pdf(Scopus)
14. Pawar Pravin, Raj Ballav, and **Amaresh Kumar** (2017) "Machining Processes of Sapphire: An Overview." International Journal of Modern Manufacturing Technologies, Volume 9(1), 47-72, www.ijmmt.ro/vol9no12017/07_Pravin_Pawar.pdf(Scopus)
15. Sourabh Sinha, Raj Ballav, **Amaresh Kumar** (2017). "Analysis of surface roughness in electric discharge machining of INCOLOY 800HT". U.P.B. Sci. Bull., Series D, Volume 79, No. 2, pp.107-114, https://www.scientificbulletin.upb.ro/rev_docs_arhiva/full8a9_182899.pdf(Scopus)
16. Piyush Jaiswal, **Amaresh Kumar**, Kanika Prasad (2017) "Assessment of drivers to implement lean manufacturing in Indian SMEs using intuitionistic fuzzy based TOPSIS approach", International Journal of Modern Manufacturing Technologies, Volume 9(2), pp. 30-38, http://www.ijmmt.ro/vol9no22017/05_Jaiswal_Piyush.pdf(Scopus)
17. Sourabh Sinha, Raj Ballav, **Amaresh Kumar** (2017). Response Surface Methodology to Evaluate Material Removal Rate in Electric Discharge Machining of INCOLOY 800HT. International Journal of Mechanical Engineering and Technology (IJMET), Volume 8(6), 299-304, https://www.iaeme.com/MasterAdmin/Journal_uploads/IJMET/VOLUME_8_ISSUE_6/IJMET_08_06_030.pdf(Scopus)

18. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016) "Finite Element Method Broach Tool Drilling Analysis Using Explicit Dynamics Ansys", International Journal of Modern Manufacturing Technologies, Volume 8(2), 54-60, http://www.ijmmt.ro/vol8no22016/08_Pravin_Pawar_1.pdf(Scopus)
19. Sudhansu Ranjan Das, **Amaresh Kumar** and DebabrataDhupal (2016), "Experimental investigations on cutting force and surface roughness in machining of hardened AISI 52100 steel using cBN tool", International Journal of Machining and Machinability of Materials, Volume 18, No. 5/6, pp. 501-520, https://doi.org/10.1504/IJMMM.2016.078997(Scopus)
20. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "Current Scenario of Machining Process In Advanced Al2O3 And Al2O3 Ceramics Composite Materials: A Study Review", Nonconventional Technologies Review Romania, Vol. 19 No. 4 pp 16-24 (Google Scholar).
21. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "Finite Element Method Analysis of Stress Intensity Factor In I Channel Section", Journal of Production Engineering, Vol.19 (1) pp 103-107 (Google Scholar)
22. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "A Study on Machining Process of Glass Materials", International Journal of Engineering and Future Technology 2016, Vol. 3, Issue No. 3 43-49 (Google Scholar) [ISSN 2455-6432]
23. SudhansuRahnjan Das, **Amaresh Kumar** and DebabrataDhupal (2015), "Study of surface roughness and flank wear in hard turing of AISI 4140 steel with coated ceramic inserts", Journal of Mechanical Science and Technology, Vol. 29, Issue 10, pp. 4329-4340. doi: https://doi.org/10.1007/s12206-015-0931-2Springer (SCI Journal) (Thomson Reuters Impact Factor: 0.761)
24. Sudhansu Ranjan Das, DebabrataDhupal, **Amaresh Kumar** (2015), "Experimental Investigations into machinability of hardened AISI 4140 steel using TiN Coated Ceramic Tool", Measurement, Vol. 62 108-126. http://dx.doi.org/10.1016/j.measurement.2014.11.008Elsevier (SCI Journal) (Thomson Reuters Impact Factor: 1.742)
25. Sudhansu Ranjan Das, DebabrataDhupal, **Amaresh Kumar** (2015), "Surface Roughness Analysis of hardened Steel using Tin Coated Ceramic Inserts", International Journal of Machining andMachinability of Materials, Vol. 17 Issue 1, pp 22-38 http://dx.doi.org/10.1504/IJMMM.2015.069217Inderscience Publications (Scopus).
26. Sudhansu Ranjan Das, R. P. Nayak, DebabrataDhupal, **Amaresh Kumar** (2014), "Surface Roughness, Machining force and Flank Wear in Turning of Hardened AISI 4340 Steel with coated Carbide Inserts: Cutting Parameters Effects", International journal of Automotive Engineering, Vol. 4, Issue 3, 758-768.
27. SudhansuRahnjan Das, **Amaresh Kumar** and DebabrataDhupal (2015), "Optimal Design Approach in Hard Turning of AISI 52100 Steel with CBN tool : Cutting Parameters Effects on Cutting Force and Surface Roughness", Applied Sciecne and Advanced Materials International, Vol. 1, No.2 pp. 66-72 (2014)
28. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "Revolutionary Developments in ECDM Process: An Overview", Materials Toady: Proceedings 2 pp 3188-3195. https://doi.org/10.1016/j.matpr.2015.07.113Elsevier (Scopus, CPCI Web of Science)
29. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "An Overview of machining process of Alumina and Alumina Ceramic Composites", Machining Sciecne and Technology, 3(1), 10-15 (Google Scholar) https://doi.org/10.13189/mst.2015.030102
30. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "Measurement Analysis in Electrochemical Discharge Machining (ECDM) Process: A Literature Survey", Journal of Chemistry and Chemical Engineering. 9. pp 140-144. (Google Scholar) https://doi.org/10.17265/1934-7375/2015.02.009
31. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "A Review on machining process of glass materials", National Journal of Emerging Technology in Mechanical Science and Engineering. Vol-5, Special Issue-1, ISSN 0976-2558, 18-22 (print).
32. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal, S.K. Mohapatra (2013), "Optimization of surface Roughness in Hard Turing of AISI 4340 Steel using Coated Carbide Inserts", International Journal of Information and Computation Technology, Vol. 3, No. 9, pp. 872-880
33. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal. (2013), "Effect of Machining Parameters on Surface Roughness in Machining of Hardened AISI 4340 Steel using Coated Carbide Inserts", International Journal of Innovations and Applied Studies, Vol. 2, No. 4, pp 445-453.
34. SudhansuRahnjan Das, DebabrataDhupal, **Amaresh Kumar** (2013), "Experimental Study and Modelling of Surface Roughness in Turning of Hardened AISI 4340 Steel using Coated Carbide Inserts", International Journal of Automotive Engineering, Vol. 3, No. 1, pp. 284-292.
35. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal (2013), "Effect of Cutting Parameters on Tool Wear, Surface Roughness and Material Removal Rate During Dry Turning of EN-31 Steel", OPJIT International Journal of Innovation and Research, Vol. 2, No. 1, pp. 22-29.
36. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal (2012), "Estimating the Effect of Cutting Parameters on Tool Wear and Workpiece Surface Temperature in Turning of AISI D2 Steel", AKGEC International Journal of Technology, Vol. 3, No. 2, pp. 8-14.
37. Kali Charan Rath, **Amaresh Kumar**, A.M. Tigga, S. S. Mohapatra (2012), "Design and Modeling of Tool Trajectory in C0 Continuity Concept by Importing the IGES Neutral File", Innovative Systems Design and Engineering Vol 3, No 3, pp 89-99
38. Kali Charan Rath, **Amaresh Kumar**, A.M. Tigga, S. S. Mohapatra (2012), "Design of Complicated Spline Trajectory With The Help of Matlab Program By The Extracted Data Through The IGES Reader For CNC Tool Motion", American Journal of Sustainable Cities and Society Issue 1 vol 1 July, pp 25-35

Book Chapters

39. Md Manzar Iqbal, M. A. Siddiqui, **Amaresh Kumar**, Subhash Singh, "Microstructures and Mechanical Properties of Al – 4% Cu/Sic Composites Fabricated by Powder Metallurgy Process", Book Title: Advanced Numerical Simulation in Science and Engineering, Reviewed by: Cambridge Scholar, Publisher: Amazon Publishing, ISBN: 979-863-132-3599, March 2020.
40. Pawar, Pravin, Raj Ballav, and **Amaresh Kumar**. "FEM Analysis of Different Materials Based on Explicit Dynamics ANSYS in Electrochemical Discharge Machine." In Simulations for Design and Manufacturing, pp. 231-258. Springer, Singapore, January 2018, https://doi.org/10.1007/978-981-10-8518-5_9

Conference Publications for Prof Amaresh Kumar (2016-20)

41. Nikita Sinha and **Amaresh Kumar**, "Challenges in Implementation of Industry 4.0 in Manufacturing Sector, National Conference on Research and Developments in Material Processing, Modeling and Characterization 2020 (RDMPMC2020), NIT Jamshedpur, 26-27 August, 2020.
42. Md Manzar Iqbal, **Amaresh Kumar**, and Subhash Singh, "Biodegradable Composite Materials for Orthopedic Implant: A Review", National Conference on Materials, Mechanics and Modelling (NCMMM 2020), NIT Jamshedpur, 29-30 August, 2020.
43. Mohammad Faisal Noor and **Amaresh Kumar**, "Barriers in implementing Industry 4.0 Principles in Small and Medium Industries in Indian Perspective", 11th International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2019), IIT Indore, 12-14 December, 2019.
44. Piyush Jaiswal &**Amaresh Kumar** (2016), "Analyzing Barriers of Lean Manufacturing Adoption in Indian SMEs Using an Integrated Approach of Grey Decision Making Trial and Evaluation Laboratory (DEMATEL)", Proceedings of the World Congress on Engineering (WCE 2016), June 29 - July 1, 2016, London, U.K. Vol II ISBN: 978-988-14048-0-0, ISSN: 2078-0966
45. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "The effect of Magnetic Field Assisted electro discharge machining process: An overview", International Conference on Precision, Meso, Micro and Nano Engineering (COPEN-9), 10th -12th December At IIT Bombay, Powai, Mumbai.
46. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "Micromachining of Borosilicate Glass : A State of Art Review", 5th International Conference on Materials Processing and Characterization (ICMPC) 12th to 13th March 2016, GRIET, Hyderabad, India.
47. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "Finite Element Method Analysis of Electrochemical Discharge Machine Using Explicit Dynamics ANSYS", 6th International & 27th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2016), December 16-18, 2016 at College of Engineering., Pune, Maharashtra, INDIA (Paper No.1150) Accepted.
48. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "Machining Processes of Pyrex Glass: A Technological Review", 6th International & 27th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2016), December 16-18, 2016 at College of Engineering, Pune, Maharashtra, (Paper No.- 239) INDIA (Accepted).
49. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2016), "Micro Nano Machining Processes of Glass Ceramic Zerodur: A Short Communication", The International Conference on Fiber Optics and Photonics – PHOTONICS, I.I.T. Kanpur, 4th to 8th December 2016 (abstract control number is 2585249) Accepted.
50. SudhansuRahnjan Das, DebabrataDhupal, **Amaresh Kumar** (2016), "Modelling and Optimization of Surface Roughness, Machining Force and Flank Wear in Hard Turning of AISI 4340 Steel with Coated Carbide inserts: An Experimental Approach", International Conference on Advances in Steel, Power and Construction Technology (ICASPCT 2016), O.P. Jindal University, Raigarh (Paper No.29) Accepted.
51. Sudhansu Ranjan Das, DebabrataDhupal, **Amaresh Kumar** (2014), "Experimental Investigation on Cutting Force and Surface Roughness in Machining of Hardened AISI 52100 Steel Using CBN Tool", 5Th International and 26th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2014), pp 3361-3366, 12th -14th December 2014, I.I.T., Guwahati.
52. Pravin Pawar, Sourabh Sinha, **Amaresh Kumar**, Raj Ballav (2014), "Review on research trends in Electrochemical Discharge Machining", 4th National Conference on Recent Advancess in Manufacturing (RAM-2014). 26-28 (2014) at Department of Mechanical Engineering, S.V.N.I.T. Surat, Gujrat, pp 132-136 ISBN No. 978-93-5156-755-4.
53. Pravin Pawar, Sourabh Sinha, Raj Ballav, **Amaresh Kumar** (2014), "A review on Machining Process of Alumina and Alumina Composite Ceramics", International Conference on Industrial, Mechanical and Production Engineering: Advancements and Current Trends (ICIMPCT), 27th to 29th November (2014), Department of Mechanical Engineering, MANIT, Bhopal, M.P., ISBN No. 978-93-84935-03-0.
54. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2014), "Status of New Development in Micromachining: A Discussion", National conference on Innovation In Futuristic Materials and Manufacturing Techniques (IFMMT-2014) 26th- 27th December 2014, Manipal University, Jaipur, Rajasthan.
55. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "Measurement Analysis in Electrochemical Discharge Machining (ECDM) Process", 4th National Conference on Advances in Metrology (ADMET) 25th to 27th February 2015, CSIR-CMERI, Durgapur, India.
56. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "A Review on Machining Process of Glass Materials", IEEE Conference on Emerging Trends in Engineering, Business and Disaster Management (ICBDM-2015), 28th to 29th February 2015, At Noorul Islam University, Kumaracoil, Tamilnadu, India.

57. Pravin Pawar, Raj Ballav, **Amaresh Kumar** (2015), "Revolutionary Developments in ECDM Process: An Overview", 4th International Conference on Materials Processing and Characterization (ICMPC) 12th to 13th March 2015, GRIET, Hyderabad, India.
58. SudhansuRahnjan Das, DebabrataDhupal, **Amaresh Kumar** (2013), "Roughness Analysis of Hardened AISI 4340 Steel", International Conference on Precision, Meso, Micro and Nano Engineering (COPEN-2013), pp. 382-387, 13th - 15th December 2013, National Institute of Technology, Calicut, Kerala.
59. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal (2013), "Optimal Design Approach for Machining of Hardened AISI 4340 Steel Using Coated Carbide Inserts", International Conference on Industrial Engineering (ICIE 2013), pp. 898-903, 20th -22th November 2013, S.V.N.I.T. Surat, Gujarat.
60. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal, K.C. Rath (2013), "Estimating the effect of machining parameters on Surface Roughness during Machining of Hardened EN24 Steel using Coated Carbide Inserts", International Conference on Communication Control and Instumentation (ICCCI-2013), pp. 44-50, 25th -27th October 2013, Gandhi Institute of Engineering and Technology, Gunupur.
61. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal, S.K. Mohapatra (2013), "Optimization of Surface Roughness in Hard Turning of AISI 4340 Steel Using Coated Carbide Inserts", International Conference on Advancements in Computing Sciences, Information Techniques and Engineering E-Learning Technologies (ACSITEET-2013), pp. 871-880, 5th -7th October 2013, Jawaharlal Nehru University, New Delhi.
62. SudhansuRahnjan Das, **Amaresh Kumar**, DebabrataDhupal (2013), "Optimal Design Approach for Machining of Hardened AISI 4340 Steel Using coated Carbide Inserts", International Conference on Sustainable Manufacturing and Operations Management (ISOM 2013) pp. 49-56, 26th -28th June 2013, Mauritius.
63. SudhansuRahnjan Das, S.K. Mohapatra, **Amaresh Kumar**, DebabrataDhupal (2013), "Estimating the Effect of cutting Parameters on Tool Wear and Workpiece Surface Temperature in Turning of AISI D2 Steel", International Conference on Extropianism Towards Convergence of Human Values and Technology (ICECHVT 2013), pp 248-254, 18th -19th January 2013, Ansal University, Gurgaon.
64. SudhansuRahnjan Das, DebabrataDhupal, **Amaresh Kumar** (2012), "Surface roughness analyses of turned hardened AISI 4340 steel with coated carbide inserts, Proceedings of 4th & 25th International Conference AIMTDR, 2012/12/14