



**JADAVPUR UNIVERSITY
KOLKATA - 700032**

**GO No.1343-Edn(U)/1U-41/11(Pt) dt.07.12.2017
EC Res. No. 18 Dated 12.11.2022**

**APPLICATION FORM FOR PROMOTION OF UNIVERSITY TEACHERS UNDER
CAREER ADVANCEMENT SCHEME**

**From :
Stage/Designation : Associate Prof. (Stage 4)**

**To :
Stage/Designation : Professor (Stage 5)**

(Assistant Professor Stage 1 to Stage 2, Stage 2 to Stage 3), Assistant Professor (Stage 3) to Associate Professor (Stage 4), Associate Professor (Stage 4) to Professor/equivalent cadres (Stage 5).

PART A : GENERAL INFORMATION AND ACADEMIC BACKGROUND

1. Employee Id	220011
2. Full Name	RANJIB BISWAS
3. Father's Name / Mother's Name	LATE TARAPADA BISWAS
4. Date of Birth	25-10-1978
5. Category	GEN
6. Differently Abled	No
7. Department / School	MECHANICAL ENGINEERING
8. Current Designation	Associate Professor
9. Academic Grade Pay (AGP) / Level	9000/13A
10. Highest Qualification	Ph.D
11. Date of last promotion , if any	
12. Date of eligibility for promotion	01-02-2025
13. Assessment Period (in years)	3
14. Address for correspondence	Flat 3D, Ganapati Enclave, 31 G. T. Road, Bally, Howrah 711201
15. Permanent Address	Flat 3D, Ganapati Enclave, 31 G. T. Road, Bally, Howrah 711201
16. Mobile No.	9830086991
17. E-mail Id	ranjibbiswas.mech@jadavpuruniversity.in

Part B. Academic Qualifications :

A. Last Academic Qualifications (From graduation onwards excluding research degree(s)):

Degree/ Diploma	Name of the Board/ University	Year of Passing	(%)of Marks Obtained	Division/ Class/Grade	Subject(s)	Doc Link
B.TECH. IN MECHANICAL ENGINEERING	KALYANI UNIVERSITY	1999	75.73%	1st	Mechanical Engineering	View
MASTER OF PRODUCTION ENGINEERING	JADAVPUR UNIVERSITY	2003	86.57%	1st	Production Technology	View

B. Research Degrees:

Degree	Title of Dissertation/Thesis	Date of Award	Name of the University	Doc Link
PHD IN ENGINEERING	'MULTIPARAMETRIC MIXES FOR CONTROLLED ND:YAG LASER MICRO- MACHINING OF ADVANCED ENGINEERING MATERIALS'	24-12-2013	JADAVPUR UNIVERSITY	View

Part C. Professional Experience :

A. Position(s) held Prior to Joining this University, if any:

Designation	Name of Employer	Date of Joining	Date of Leaving	Gross Salary	Reason for Leaving	Doc Link
Lecturer	MCKV Institute of Engineering, 243, G.T. Road (N), Liluah, Howrah-711204	01-08-2003	31-07-2008	227316	Promotion	View
Sr. Lecturer	MCKV Institute of Engineering, 243, G.T. Road (N), Liluah, Howrah-711204	01-08-2008	31-10-2008	262200	Promotion	View
Assistant Professor	MCKV Institute of Engineering, 243, G.T. Road (N), Liluah, Howrah-711204	01-11-2008	31-10-2011	580512	Promotion	View
Associate Professor	MCKV Institute of Engineering, 243, G.T. Road (N), Liluah, Howrah-711204	01-11-2011	30-11-2019	1223928	Promotion	View
Professor	MCKV Institute of Engineering, 243, G.T. Road (N), Liluah, Howrah-711204	01-12-2019	31-01-2021	1348524	Received an offers to join as Registrar of Kazi Nazrul University	View

Designation	Name of Employer	Date of Joining	Date of Leaving	Gross Salary	Reason for Leaving	Doc Link
Registrar	Kazi Nazrul University, PS: Nazrul Road, Kalla Bypass More, North, P.O. C H Kalla, Asansol, West Bengal 713340	01-02-2021	31-01-2022	1932312	Received offer to join Jadavpur University	View

B.Posts held after Appointment at the University :

Designation	Department/ School	From date	To date	Pay Scale	AGP/Level	Doc Link
Associate Professor - Stage 4	MECHANICAL ENGINEERING	01-02-2022	31-01-2025	131400-217000	9000/13A	View

Part D. Teaching Experience :

A.Period of Teaching and / or Research Experience :

Level of Classes	No. of Years
PG Classes	1
UG Classes	21
Post-doctoral Research	0
Doctoral Research	9

B.Field(s) of Specialisation under the Subject/Discipline :

MANUFACTURING TECHNOLOGY
NON-TRADITIONAL MACHINING
MICROMACHINING

Part E. Orientation / Induction Program(s) or Refresher / Short-term Course(s):

Program(s) / Course(s) Attended :

Title of the Course	Place	Duration (No. of Weeks)	Period : From Date- To Date	Doc Link
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API SCORE CALCULATION MATRIX

API CATEGORY : I. TEACHING, LEARNING AND EVALUATION RELATED ACTIVITIES

Sl.No.	Nature of Activity	Max Marks	Hours spent per academic year	Self Appraisal Score	Verified API Score	Doc.Link(if any)
1.	Direct Teaching (self declaration)	60	480	60.00	60.00	View

2.	Examination duties (question paper setting, Invigilation, evaluation of answer scripts etc.) (self declaration)	10	100	10.00	10.00	View
3.	Innovative Teaching- learning methodologies, updating of subject contents/courses, mentoring etc. (self declaration)	20	175	17.50	17.50	View
Total				87.50		

API SCORE CALCULATION MATRIX

CATEGORY II: PROFESSIONAL DEVELOPMENT, CO-CURRICULAR AND EXTENSION ACTIVITIES

Nature of Activity	Max Marks	Hours spent per academic year	Self Appraisal Score	Verified API Score	Doc.Link (if any)
a). Student related co-curricular, extension and field based activities. (i) Discipline related co-curricular activities (e.g. remedial classes, career counseling, study visit, student seminar and other events.) (ii) Other co-curricular activities (Cultural, Sports, NSS, NCC etc.). Extension and dissemination activities (public /popular lectures/talks/ seminars etc.)	15	140	14.00	14.00	View
b). Contribution to corporate life and management of the department and institution through participation in academic and administrative committees and responsibilities. i). Administrative responsibility (including as Dean / Principal / Chairperson / Convener / Teacher-in-charge/ similar other duties that require regular office hrs for its discharge) ii). Participation in Board of Studies, Academic and Administrative Committees (Self declaration)	15	150	15.00	15.00	View
c.) Professional Development activities (such as participation in seminars, conferences, short term training courses, industrial experience, talks, lectures in refreshers/faculty development courses, dissemination and general articles and any other contribution	15	150	15.00	15.00	View
Total			44.00		

API SCORE CALCULATION MATRIX

CATEGORY III: Research and Academic Contribution

III-A : Journal Publication

Sl. No.	Yr.of Publ.	Title of the Paper	No.of authors	Role of Applicant	No.of authors in others category	Journal Name	Volume (Issue), pg no. from - to	Journal Type	Impact Factor (I.F)	I.F Doc link	Jrnl. Pub. Link	Self Appraisal Score	Verified API Score
1	2022	Analytical model for ultrashort-pulse laser heating in a titanium nanofilm with implementation of dual-phase-lag theory	3	Corresponding author / supervisor / mentor	0	Journal of Thermal Analysis and Calorimetry	Vol. 147, pp. 7337–7352	UGC Care List	3.200	View	View	30.25	30.25
2	2023	Analysis of performance characteristics with artificial intelligence based TLBO technique for laser drilling of Monel superalloy	7	Corresponding author / supervisor / mentor	0	Optics and Laser Technology	Vol. 164, pp. 109554	UGC Care List	4.600	View	View	30.25	30.25
3	2024	Performance analysis if fiber laser micro-marking on aluminium 7075 alloy	6	Corresponding author / supervisor / mentor	0	Journal of Molecular and Engineering Materials	Vol. 12(4)	UGC Care List	2.400	View	View	30.25	30.25
4	2024	An experimental investigation of microchannels on transparent material using Nd: YAG laser transmission technique	5	Corresponding author / supervisor / mentor	0	Optics and Laser Technology	Vol. 175, pp. 110671	UGC Care List	4.600	View	View	30.25	30.25
5	2024	A novel method for air assisted nanosecond pulsed fiber laser beam transmission micro-channelling on thick PMMA material	5	Corresponding author / supervisor / mentor	0	Materials Science and Engineering : B	Vol. 305, pp. 117433	UGC Care List	3.900	View	View	30.25	30.25
6	2024	Prediction of quality characteristics of micro-channels by deep learning algorithm during laser transmission ablation of PMMA	6	Corresponding author / supervisor / mentor	0	Materials Today Communications	Vol. 38, pp. 108142	UGC Care List	3.700	View	View	30.25	30.25
7	2024	Prediction and optimization of Nd: YAG laser transmission micro-channelling on PMMA employing an artificial neural network model	6	Corresponding author / supervisor / mentor	0	Infrared Physics & Technology	Vol. 137, pp. 105121	UGC Care List	3.100	View	View	30.25	30.25

Sl. No.	Yr.of Publ.	Title of the Paper	No.of authors	Role of Applicant	No.of authors in others category	Journal Name	Volume (Issue), pg no. from - to	Journal Type	Impact Factor (I.F)	I.F Doc link	Jrnl. Pub. Link	Self Appraisal Score	Verified API Score
8	2025	Surface characterization of fiber laser texturing on Hastelloy C-276 at different temperatures	6	Corresponding author / supervisor / mentor	0	Optics & Laser Technology	Vol. 181, pp. 111809	UGC Care List	4.600	View	View	30.25	30.25
9	2025	A parametric evaluation of fiber laser micro-channelling performance on thick PMMA in water medium	5	Corresponding author / supervisor / mentor	0	Materials Science and Engineering : B	Vol. 311, pp. 117776	UGC Care List	3.900	View	View	30.25	30.25
10	2025	Artificial intelligence based experimental investigation of underwater fiber laser transmission process during micro-channelling operation on PMMA	5	Corresponding author / supervisor / mentor	0	Optics & Laser Technology	Vol. 181, pp. 111593	UGC Care List	4.600	View	View	30.25	30.25
											Total	302.50	

III-B(i): Publications other than journal articles

Sl. No.	Yr.of Publ.	Type of Publication	Title of the Chapter/ Paper	Title of the Book/ Proceedings	No.of authors	Name of Publisher	Status of Publisher	ISBN/ISSN No	Doc. Link	Self Appraisal Score	Verified API Score
1	2024	Book Chapter/ Conf. Proceedings	Quality Characteristics of Borosilicate Glass Machined Through Abrasive Water Jet: An Optimization and Experimental Approach	From Smart City to Smart Factory for Sustainable Future: Conceptual Framework, Scenarios, and Multidiscipline Perspectives. SCFF 2024. Lecture Notes in Networks and Systems	5	Springer, Cham	International	978-3-031-65656-9	View	2.00	2.00
2	2024	Book Chapter/ Conf. Proceedings	Experimental Investigation of Fiber Laser Micro-channeling on Copper	Advances in Materials, Manufacturing and Design. INCOM 2024. Lecture Notes in Mechanical Engineering	4	Springer, Singapore	International	978-981-97-6667-3	View	2.50	2.50

Sl. No.	Yr.of Publ.	Type of Publication	Title of the Chapter/ Paper	Title of the Book/ Proceedings	No.of authors	Name of Publisher	Status of Publisher	ISBN/ISSN No	Doc. Link	Self Appraisal Score	Verified API Score
3	2024	Book Chapter/ Conf. Proceedings	Multi-criteria Decision-Making for Laser Metal-Polymer Welding: A MACONT Approach	Advances in Materials, Manufacturing and Design. INCOM 2024. Lecture Notes in Mechanical Engineering	6	Springer, Singapore	International	978-981-97-66 67-3	View	1.67	1.67
4	2024	Book Chapter/ Conf. Proceedings	MODELLING AND ANALYSIS OF FIBER LASER MICROCHANNELLING ON COPPER	Proceedings of the 2nd International Conference on Mechanical Engineering Jadavpur University Kolkata India	4	Jadavpur University Press, Jadavpur University	National	978-81-95480 6-6-1	View	1.25	1.25
									Total	7.42	

III-B(ii): Referring of Journal Papers from UGC list

Sl. No.	Journal Name	Title of the paper	Year of review submission	Review Invitation Letter link	Review submission document link	Self Appraisal Score	Verified API Score
1	Journal of Thermal Analysis and Calorimetry	Enhancing EV Battery Cooling Efficiency Using Magnetic Nanofluid and External Magnetic Field Synergies	2024	View	View	5.00	5.00
2	Journal of Thermal Analysis and Calorimetry	IMPROVING ELECTRIC VEHICLE BATTERY COOLING EFFICIENCY WITH NANOFLUID AND VIBRATION INTEGRATION: A NOVEL THERMAL MANAGEMENT APPROACH	2024	View	View	5.00	5.00
3	Journal of Thermal Analysis and Calorimetry	A MOVE TOWARDS ENVIRONMENTAL SUSTAINABILITY: AN ANALYSIS OF THE IMPACT OF STATE-LEVEL INCENTIVE POLICY IMPROVING THE ADOPTION OF ELECTRIC VEHICLES IN INDIA	2024	View	View	5.00	5.00
4	Journal of Materials Research and Technology	Influence of parameters on performance characteristics and defects during laser micro drilling of titanium alloys using RSM	2023	View	View	5.00	5.00
5	Optics and Laser Technology	Experimental Investigation on a novel hybrid composite developed by laser engineering net shaping: Microstructure, Optimization and Ranking Analysis	2023	View	View	5.00	5.00

Sl. No.	Journal Name	Title of the paper	Year of review submission	Review Invitation Letter link	Review submission document link	Self Appraisal Score	Verified API Score
6	Journal of Thermal Analysis and Calorimetry	AN MHD Slip flow and heat transfer of jeffrey fluid with carbon nanotubes AND NAVIER'S SLIP	2023	View	View	5.00	5.00
7	Materials Today: Proceedings	DMOGA on Performance Measures of WEDM for Titanium Matrix Composite	2022	View	View	5.00	5.00
8	Sustainable Energy Technologies and Assessments	Manuscript Number: SETA-D-22-01172R2 Effect of Different Staggered Welding Spot Configuration and Streamwise Length on Thermo-Hydrodynamic Flow in Pillow-Plate Heat Exchanger -A Numerical Study	2022	View	View	5.00	5.00
9	Journal of The Institution of Engineers (India): Series B	Development and Performance Evaluation of a Smart Footwear Disinfecting Station for Crowded Premises	2022	View	View	5.00	5.00
					Total	45.00	

CATEGORY III-C: Research Projects

III-C (i): Sponsored Project

Sl. No.	Area of the Applicant	Title of the Project	Name of the Funding Agency	Duration (no.of years)	Grant Sanctioned (in Lkhs)	Upload Grant Letter link	Self Appraisal Score	Verified API Score
						Total	None	

III-C (ii): Consultancy Project

Sl. No.	Area of the Applicant	Title of the Project	Name of the Funding Agency	Duration (no.of years)	Amount Mobilized	Upload Grant Letter link	Self Appraisal Score	Verified API Score
						Total	None	

III-C (iii): Projects Outcome/Output

Sl. No.	Area of the Applicant	Type	Title	Level	Doc.No./ Patent No/ Other ref. no	Status (if patent only)	Upload doc.link	Self Appraisal Score	Verified API Score
1	Engineering & Technology	Patent	A METHOD OF UNDER WATER LASER BEAM TRANSMISSION MICROMACHINING FOR THICK TRANSPARENT MATERIAL	National	Application No. 202431039839 A	Published	View	20.00	20.00
2	Engineering & Technology	Patent	A METHOD FOR LASER BEAM SAWING	National	Application No. 202431020910 A	Published	View	20.00	20.00
							Total	40.00	

III-D: Research Guidance

Sl. No.	Name of the Student	Degree	Title of the Thesis	Status	Document Link	Self API Score	Verified API Score
1	Subham Biswas	PhD	LASER TRANSMISSION MICRO-MACHINING OF TRANSPARENT MATERIAL	Degree awarded	View	15.00	15.00
2	Rajat Dutta	PhD	LASER FABRICATION/ WELDING	Ph.D Registered	View	5.00	5.00
3	Krishanu Dutta	PhD	INVESTIGATION OF NON-TRADITIONAL MACHINING (NTM) PROCESSES DURING MACHINING OF ADVANCED ENGINEERING MATERIALS	Ph.D Registered	View	5.00	5.00
4	Somnath Mondal	Mtech	A STUDY OF PROCESS PARAMETERS DURING ELECTRIC DISCHARGE MACHINING ON INCONEL	Degree awarded	View	5.00	5.00
5	Aakash Kumar	Mtech	MULTI OBJECTIVE OPTIMIZATION OF PROCESS PARAMETERS OF ELECTRIC DISCHARGE MACHINING (EDM) ON NITINOL ALLOY USING GREY RELATIONAL ANALYSIS	Degree awarded	View	5.00	5.00
6	Lov Awasthi	Mtech	EXPERIMENTAL INVESTIGATION OF ABRASIVE WATER JET MACHINING ON SA 387 GRADE 22	Degree awarded	View	5.00	5.00
7	Piyush Kumar	Mtech	EXPERIMENTAL INVESTIGATION OF QUALITY CHARACTERISTICS DURING ABRASIVE WATER JET MACHINING ON BOROSILICATE GLASS	Degree awarded	View	5.00	5.00
					Total	45.00	

III-E : Fellowships, Awards and Invited lectures delivered in conferences / seminars

III-E : (i) Fellowship / Award from Academic Bodies/Associations

Sl. No.	Type	Name of the Fellowship/Award	Name of the Awarding Body/Association	Level	Document Link	Self Appraisal Score	Verified API Score
					Total	None	

III-E : (ii) Invited Lecture / Paper presented

Sl. No.	Type	Title of the Lecture/ Paper	Name of the Conference/ Seminar/ Workshop	Organized by	Venue	Duration	Level	Document Link	Self Appraisal Score	Verified API Score
1	Invited Lecture	Research areas in the field of Non-traditional machining processes	AICTE Training And Learning (ATAL) Academy FDP on "Application developments in the Lab on a Chip technology for Fluid and Thermal Sciences "	Department of Mechanical Engineering, Haldia Institute of Technology, Haldia, West Bengal	Department of Mechanical Engineering, Haldia Institute of Technology, Haldia, West Bengal	29th January to 3rd February 2024	National	View	5.00	5.00
2	Invited Lecture	Laser Beam Machining: Research Trends	Seminar on "Advances in Modern Manufacturing Processes"	Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex, Kolkata	Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex, Kolkata	3rd March 2023	National	View	5.00	5.00
3	Invited Lecture	Research Issues in Hybrid Manufacturing Processes	Workshop on "Research Issues and Advances in Mechanical Engineering and Allied Interdisciplinary Areas"	Budge Budge Institute of Technology, Kolkata	Budge Budge Institute of Technology, Kolkata	20-22 February, 2023	National	View	5.00	5.00
								Total	15.00	

III-E (iii): e-Learning Delivery Process/Material

Sl. No.	Name of the Module	Name of the Course	Name of the Program	Document Link	Self Appraisal Score	Verified API Score
				Total	None	



JADAVPUR UNIVERSITY
KOLKATA - 700032

RANJIB BISWAS - Final Report

Stage / Designation From:	Associate Prof. (Stage 4)
Stage / Designation To:	Professor (Stage 5)
Date of last promotion(if any) :	
Date of eligibility for promotion :	01-02-2025
Assessment Period (no.of years):	3

API Score Summary

Category	Period	Self Appraisal Score	Status
I	Yearly	87.50	Criteria Satisfied
II	Assessment Period	132.00	Criteria Satisfied
III	Assessment Period	454.92	Criteria Satisfied
II + III	Assessment Period	586.92	Criteria Satisfied

Signature of Applicant



JADAVPUR UNIVERSITY
KOLKATA - 700032

Career Advancement Scheme(CAS) Forwarding Letter

To
The Registrar
Jadavpur University

Dear Madam,

Prof./Dr./Mr./Ms. RANJIB BISWAS, a faculty member in the Department/School of MECHANICAL ENGINEERING, is applying for promotion under the "Career advancement scheme(CAS)" from Associate Prof. (Stage 4) to Professor (Stage 5).

I forward his/her application for submission to the University and for due consideration.

Thanking you


(Head of the Department/Director of School)

Date: 31/1/2025

Seal

Professor L. Head
Dept. of Mechanical Engineering
Jadavpur University, Kolkata-32