



Curriculum Vitae

- **Name :Dr. Ashok Mahadu Mahajan**
- **Designation: Senior Professor and Head,** Department of Electronics & Ex-Registrar, KBCNMU, Jalgaon
 - **Principal Investigator:** *Class 10000 clean room* for semiconductor wafer fabrication in Department of Electronics, KBCNMU, Jalgaon
 - **Advisor:** International student's Cell, KBCNMU, Jalgaon
 - **Co-ordinator:** Rashtriya Uchchatar Shiksha Abhiyan (RUSA) cell, KBCNMU, Jalgaon (upto Jan-2017)
- **International Position:**
 - **Overseas Famous Teacher (2018-2020)** at College of Engineering, China Agricultural University, Beijing, China (worth **Yuan 2.0 Lacs** i.e. Rs 20.00 Lacs, by **Ministry of Education and SAFEA, China**).
 - **Visiting Professor:** National Technological University of Science and Technology (NTUST), Taipei, Taiwan (2018) and
 - **Visiting Professor:** School of Electronics and information science, North China University of Technology (NCUT), Beijing, China (2019 onwards)
- **Official Address :** Kavayitri Bahinabai Chaudhari North Maharashtra University, Post Box no. 80, UmaviNagar, Jalgaon (MS) 425 001, INDIA
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ammahajan.ele@gmail.com; 10kcleanroom@nmu.ac.in
 - **Web URL :** www.ammahajan.in
- **Date of Birth :** 18th December 1963.
- **Residence :** “Aawdai”, Plot No.5, Gat No.98, Nimkhedi Shivar, Near Hira Shiva Colony, Jalgaon-425001, India.

Educational Qualifications:

Degree	University/Institution	Year (Award)	Title
Ph. D. (Electronics)	North Maharashtra University, Jalgaon, India.	2003	Fabrication of plasma enhanced chemical vapor deposition system and growth of thin films by PECVD (Electronics)
M.Phil. (Electronics)	Shivaji University, Kolhapur, India.	1995	Design and Investigation of Some Active R filter configuration (Electronics)
M. Sc. Physics (Electronics)	Marathwada University, Aurangabad, India.	1986	Physics (Electronics)

Technical Qualifications:

S. N	Diploma/ Course	University/Institution	Year	Specialization
1	VLSI DESIGN	Jawaharlal Nehru Technological University, Hyderabad	Aug. - Sept. 2001	VLSI Design, Tools (Front End & Back end), Fabrication technology, Floor-planning, packaging etc.
2	VLSI Design & VHDL Tools training	C-DAC Center, Soft Polynomials, Nagpur	Nov. 2000	VLSI Design, Simulation & Synthesis
3	PGDCA	A. P. E. L., Hyderabad	1996	Introduction to windows, MS-Office, FoxPro programming, C/C++ Programming, SAD
4	D. A. S.	Master Chip, Nizamabad	1996	Accounting Software (Ex)
5	C. C. O.	Shivaji University, Kolhapur	1992	Computer fundamentals, Lotus 1-2-3, dBASE- III+, Graphics

➤ **Employment History:**

Name of Employer	Post held	Period	Accountability
Kavayitri Bahinabai Chaudhari North Maharashtra University (KBCNMU), JALGAON, INDIA.	Head, Department of Electronics & Senior Professor (Academic Level-15)	7th June-2021 to till date	Overall administration of Department of Electronics, KBCNMU, Jalgaon and .. To teach M.Sc. (P.G.) I & II yr. Classes, Conduct practicals , Seminars, tutorials, Guide Ph. D. research students M Sc students towards their research based projects by the way of monitoring the fabrication processes in class 10000 clean room in MDLN research Laboratory and Advisor, International Students Cell, KBCNMU, Jalgaon
		11 th Jan-2021 to till date	
	Professor of Electronics	9 th Jan. 2017 to 11 th Jan-2021	To teach M.Sc. (P.G.) I & II yr. Classes, Conduct practicals, Seminars, tutorials, Guide M.Sc., M. Tech. and Ph. D. research students and to execute the Govt. funded research projects through MDLN research Lab. Co-ordinator, Capacity Building Centre and Advisor, International Students Cell, KBCNMU, Jalgaon
	Professor of Electronics and Registrar	9 th Jan. 2012 to 8 th Jan. 2017	To execute overall administration as a Chief Administrative Officer of the university and to pursue Research (through funded research projects) in MDLN lab at Deptt of Electronics
	Professor of Electronics	1 st Jan. 2009 to 8 th Jan. 2012	To teach M.Sc. (P.G.) I & II yr. Classes, Conduct practicals, Seminars, tutorials, Guide M.Sc., M. Tech. and Ph. D. research projects and to execute the Govt. funded research projects through MDLN research Lab.
	Reader (Associate Professor)	July-2003 to 31 st Dec.-2008	To teach M.Sc. (P.G.) I & II yr. Classes, Conduct practicals, Seminars, tutorials, Guide M.Sc., Ph. D. research students and to pursue research projects
	Lecturer in Selection Grade	March-2001 to July-2003	To teach M.Sc.(P.G.) I & II yr. Classes, Conduct practicals, Seminars, tutorials, Guide M.Sc. research projects and to pursue individual research
LalBahadur ShastriMahavi dyalaya, Dharmabad, District: Nanded, INDIA.	Lecturer in Selection Grade	Aug-1999 to March-2001	To pursue research work at Department of Electronics, at N M U, Jalgaon (Under FIP Scheme)
	Lecturer in Senior Scale	Aug-1994 to Aug-1999	To teach M.Sc. (P.G.) I & II yr. Classes, Conduct practical's and Seminars.
	Lecturer	Aug-1986 to Aug-1994	To teach B.Sc. (U.G.) Classes, Conduct practicals and Seminars

Academic Visits Abroad:

S. N.	Country Visited	Duration of Stay	Purpose of Visit
01	China	7 th Dec 2019 to 19 th Dec-2019 (during winter vacation)	To deliver lectures on “ Advanced Digital Systems ” in school of Electronics and information Engineering, NCUT, Beijing as a” Visiting Professor ”
02	China	15 th Nov-2019	To deliver a talk entitled “Novel High-k.....” to research group of Prof XinPing Qu in School of Microelectronics, Fudan University, Shanghai
03	China	21 st Oct2019 to 19 th Nov 2019	To deliver a various expert talks/reports as “OVERSES DISTINGUISHED TEACHER” (Project funded by Ministry of Education & SAFEA, Govt. of China)and researchguidance to the students of Applied Physics department, CAU, Beijing, China. Taught advanced digital systems(ADS) course to the UG students of Electronics and Information deptt, NCUT, Beijing as a Visiting Professor
04	Portugal (Nova University, Lisbon)	15 th – 20 th Sept- 2019	To participate in the 4 th Project Management Board Meeting of ERASMUS+ funded CABGIN project as a Co-ordinator from KBCNMU, Jalgaon
05	Poland (WUST, Wroclaw)	3 rd to 7 th Sept- 2019	To present paper in international conference ICBHE-2019 entitled “Role of Internationalization in HEI with reference to KBCNMU, Jalgaon” and to participate as an expert panelist in the panel entitled” Role of ICT in Teaching”
06	China (Beijing)	24 th May 2019 to 22 nd June-2019 (during Summer vacation)	To deliver a various expert talks/reports as “OVERSES DISTINGUISHED TEACHER” (Project funded by Ministry of Education & SAFEA, Govt. of China)and researchguidance to the students of Applied Physics department, CAU, Beijing, China.Taught advanced CMOS technology course to the UG students of Microelectronics deptt, NCUT, Beijing as a Visiting Professor
07	China (Suzhou)	18& 19 th June- 2019	To participate in IEEE international conference on IC design technology (ICICDT2019) as a honored guest by Fudan university, Shanghai ayt Suzhou, China
08	China (Shanghai)	17 th June-2019	To deliver a talk entitled “Novel High-k/Metal Gate (HKMG) stacks for advanced CMOS technology” to research group in School of Microelectronics, Fudan University, Shanghai
09	Belgium	24 th Feb- to 3 rd Mar-2019	To participate in the Professional development training program for Teachers under the aegis of ERASMUS+ funded consortium project ‘CABGIN’ in EVP scheme at University of Ghent, Belgium
10	Slovakia	03 to 06 Feb-2019	To attend Project Management Board Meeting of ERASMUS+ funded CABGIN project as a Co-ordinator from KBCNMU
11	China (Beijing)	04 th to 22 nd December 2018 (during winter vacation)	To deliver a various expert talks/reports as “OVERSES DISTINGUISHED TEACHER” (Project funded by Ministry of Education & SAFEA, Govt. of China) towards advanced CMOS technology to the master, research and UG students of Applied Physics department, China Agricultural University, Beijing,

			China.
12	China (Beijing)	04th to 13th November 2018(during Diwali holidays)	To deliver a various expert talks/reports as “OVERSES DISTINGUISHED TEACHER” (Project funded by Ministry of Education & SAFEA, Govt. of China) towards advanced CMOS technology to the master, research and UG students of Applied Physics department, China Agricultural University, Beijing, China.
13	China (Beijing)	12th October to 25th October 2018	To deliver a various expert talks/reports as “OVERSES DISTINGUISHED TEACHER” (Project funded by Ministry of Education & SAFEA, Govt. of China)towardsadvanced CMOS technologyto the master, research and UG students of Applied Physics department, China Agricultural University& School of Electrical and Information Science, NCUT, Beijing, China.
14	Malaysia (Penang)	26thJune to 28th June 2018	To visit the School of Materials and Minerals Engineering, University Sains Malaysia, Penang, Malaysia to discuss the proposal of ASEAN MS-INDIA project with Prof. Cheong.
15	Taiwan (Taipei)	22nd May to 1st June 2018	To visit the research laboratories and to deliver lectures series in the Department of Materials Science and Engineering, NTUST, Taipei, Taiwan as a ‘ Visiting Professor ’.
16	WrUST, Wraclaw, Poland	24th – 26th January 2018	WP3 meeting of Erasmus+ funded consortium project CABGIN at WrUST, Wraclaw, Poland
17	Taiwan (Hsinchu)	20th Oct-2017	To visit the research laboratories and to deliver an invited talk on “High-k/low-k thin films based MOS devices for advanced CMOS technology” at Department of Materials Science and Engineering, NCTU, Hsinchu, Taiwan.
18	Taiwan (Taipei)	19th Oct-2017	To visit the research laboratories and give the presentation/introduction about the facilities and School of Physical Sciences, NMU and signing of MoU, with Department of Material Science Engineering, at National Taiwan University of Science and Technology (NTUST, Taiwan Tech), Taipei, Taiwan.
19	China (Beijing)	17th Oct-2017	To deliver a talk entitled “Dielectric thin films based MOS devices for advanced CMOS technology” and to visit Applied Physics department, China Agricultural University, Beijing, China.
20	China (Beijing)	15th Oct. -17th Oct. 2017	To deliver an invited talk in 2 nd International Workshop “Materials for Advanced Interconnects and Packaging MAIP-2017)”at North China University of Technology (NCUT), Beijing, China.
21	Cyprus	6th to 7th July 2017	To participate in 2 nd meeting of Erasmus+ funded consortium project CABGIN at Frederick University, Cyprus
22	China (Beijing)	29th Oct. -2nd Nov. 2016	To participate in official meeting to discuss the BRICS multilateral tri-country research project of China , Russia and India and to deliver an invited talk in the workshop on “Materials for Advanced Interconnects and Packaging”
23	Germany (Berlin, Frankfurt Oder)	21st – 24th Sept. 2015	To visit Helmholtz Zentrum, Berlin and IHP Microelectronics, Frankfurt Oder, Germany

24	Poland (Wroclaw)	21st Sept. 2015	To visit Wroclaw University of Technology, Wroclaw to initiate the futuristic collaborations between NMU and WUT, Poland .
25	Poland (Warsaw)	15th – 18th Sept. 2015	To Participate in International Conference E-MRS 2015 and to visit Warsaw University of Technology, Warsaw to initiate the futuristic collaborations between NMU and WUT, Poland .
26	Netherland (Amsterdam)	14th Sept. 2015	To visit University of Amsterdam, Netherland to initiate the futuristic collaborations between NMU and UA, Netherland .
27	Japan (Tokushima)	19th-20th March 2015	To deliver invited talk in International Symposium at Tokushima University, Tokushima, Japan .
28	USA (Riverside, Santa Barbara, Los Angeles, New York)	3rd -9th June 2014	To visit UCSB Nano lab laboratory to carry out some device fabrication work and to sign MoU between NMU and University of California, Riverside (UCR), USA .
29	Mexico	30th May-2nd June 2014	To visit CETYS University and to deliver invited talk at CETYS University, Ensenada Campus, Mexico .
30	Bangkok (Thailand)	30th Nov.-2nd Dec. 2013	To participate in International Conference on Energy, Environment and Sustainable Economy (EESE 2013) at Bangkok, Thailand .
31	Japan (Tokushima)	3rd-5th March 2013	To deliver invited talk and to visit Tokushima University, Tokushima, Japan .
32	Germany (Dresden)	8th-9th July 2011	To visit Fraunhofer Center Nanoelectronic Technologies (CNT) at Dresden, Germany .
33	Czech Republic (Prague)	3rd-8th July 2011	To Participate in an International Conference, ICFSI-2011 at Institute of Physics of the Academy of Sciences of the Czech Republic, Prague, Czech Republic .
34	Maldives (Male)	25th-30th May 2011	To Participate in an International IEEE Conference, EESP-2011, Maldives .
35	USA (San Francisco, Santa Barbara, Los Angeles, New York)	5th-19th April 2010	To participate in International Conference MRS 2010 and to visit UCSB NNIN Nano lab to carry out some device fabrication work, USA .
36	JAPAN (Tokyo, Nagoya, Tokushima)	1st-8th Nov. 2008	To participate in International Workshop IWDTF-08 at Tokyo, to visit Tokushima University, Tokushima and The Nagoya University, Nagoya, Japan .
37	Italy (Milan, Trieste, Cosenza & Roma)	29th Nov.-11th Dec. 2006	To visit the advanced research laboratories like MDM, INFN and Licryl etc, Italy .
38	France (PARIS)	25th-28th Nov. 2006	To visit the Laboratory at University Pierre and Marie curie, department of Microelectronics, France .
39	Algeria	18th-24th Nov. 2006	To Participate in International Conference, ICMNT-06, Algeria .
40	Seoul & Daejeon, South Korea	27th-30th April 2004	To deliver invited talks at KIST Seoul & KAIST, Daejeon, South Korea .
41	California, USA	18th-25th April 2004	To present paper in International Conference ICMCTF-04 at SAN DIEGO, USA .
42	California, USA	25th April-5th May 2003	To present paper in International Conference ICMCTF-03 at SAN DIEGO, USA .

- **Working Experience :Total 36+ years**
(Teaching, Research and Educational Administration)
- **Teaching following courses (at KBMNMU PG students) :**
 - VLSI Design techniques
 - Principles of CMOS VLSI design
 - CMOS processing technology
 - VLSI design methods for ASICs
 - Device Fabrication Techniques (DFT)
 - VLSI Design tools (front-end & back-end)
 - Optoelectronics
 - Mathematical Methods for Electronics (MME)
 - Digital Electronics and Advanced Digital Systems
 - Analog circuit design techniques
 - Digital circuit design and Digital Signal Processing (DSP)
 - Automatic process control systems
 - Industrial Automation and Control System
 - Micro-Electro-Mechanical System (MEMS)
 - Advance Communication System (ACS)

International Teaching Assignments (for UG/PG/Research students) as a VISITING PROFESSOR

- High-k/low-k thin films based MOS devices for advanced CMOS technology (at NTUST, Taipei, Taiwan during May/June-2018)
 - Introduction to Advanced CMOS technology (at NCUT, Beijing, China, during May-June-2019)
 - Advanced Digital Systems (at NCUT, Beijing, China during Oct to Dec-2019 and during Sept to Nov-2020 through online mode)
 - Principles of Digital Systems (at NCUT, Beijing, China during April to June-2020 through online mode)
- **Research Area:**
- Deposition of high-k dielectric thin films (by PEALD, RF-Sputtering), fabrication of **novel High-k / Metal Gate stacks** on Si, Ge & compound semiconductors, MOS capacitors and characterization for advanced CMOS technology (FEOL).
 - Fabrication of **high-k/2D (or 2D/high-k)** based MOS capacitors Optoelectronics applications
 - Fabrication of **novel high-k nanolaminated MIM structures** for Memristors/RF applications
 - Fabrication and Characterization of **2D** transition metal dichalcogenides (TMDs) based metal oxide semiconductor devices
 - Deposition of **low dielectric thin films**, Aerogel, Xerogel, Surfactant and Porogen based **low-k thin films** on Si substrates and their characterization, fabrication of MIS structures for ULSI technology (BEOL).
 - Investigation of **novel rare earth oxide materials** for nano devices for future ULSI technology.
 - Polymer based gas sensors.

➤ **Major Projects executed (as a Principal Investigator):**

a) International Consortium Projects: CABGIN

Sr. No.	Title of Project	Project Expenditure	Granting Agency	Date of start	Date of Completion
Completed					
01	“OVERSEAS FAMOUS TEACHER AWARD ” China Agricultural University, Beijing and Microelectronics Deptt, North China University of Technology, Beijing, China.	2 lacs Yuan (~ Rs 20 lacs per year)	MoE & SAFEA, Govt. of China	Oct 2018	Sept 2020
02	Establishment of Capacity Building Centers as a Sustainable Solution to Raise the Standards of Teaching Staff in Indian HEI’s CABGIN <i>Participation: One University from each of the following EU countries Poland, Portugal, Belgium, Slovakia, Cyprus and 5 Indian Universities including KBCNMU, Jalgaon.</i>	(947,741,66 EUR) NMU(68,210 Euro)	ERASMUS +	15 th Oct 2016	14 th Oct 2019
KBCNMU Co-ordinator/PI: Prof. A. M. Mahajan					

b) Major Research Projects: (Completed: 07 and Ongoing: 01 as Principal Investigator)

Sr. No.	Title of Project	Project Grant (Rs. In Lacs)	Granting Agency	Date of start	Date of Completion
Ongoing					
1.	FIST, level-I (School of Physical Sciences)	152.00	DST, New Delhi	1 st April-2019	On going (5 years)
Completed					
2	Investigation of high-k dielectrics ultra-thin films on compound semiconductor by ALD for alternative gate stack devices	12.50	CSIR, New Delhi	June 2016	May 2019
3	Deposition and electrical characterization of rare earth oxide doped high-k films on Si substrates for nanoscale MOSFETs	10.98	UGC, New Delhi	July. 2015	June 2018
4	An innovative interfacial control layer on Ge channel substrate for the effective fabrication and integration of novel “Ge/ALD High-k/capping layer/ Metal (bilayer) Gate stacks” for future Nano electronics applications.	50.66	Nano-mission, DST, New Delhi	Oct 2012	April 2016
5	Deposition and characterization of silica aerogel low-k thin films as interlayer dielectric (ILD) in ULSI circuits	22.34	SERB, DST, New Delhi	Aug 2012	Aug 2015
6	Surface modification and Electrical characterization of Low-k thin film for	15.5	CSIR, New Delhi	May 2009	April 2012

	dielectric application in Nanoelectronics				
7	Investigation, fabrication and characterization of different MIS structures for ULSI technology	12.24	UGC, New Delhi	May 2009	Oct. 2011
8	Characterization of Dielectric films deposited by PECVD system	10.67		Jan. 2005	Dec. 2007

Total amount received Rs. 286.89 Lacs.

(Rupees Two crore eighty six lacs eighty nine thousands only)

c) Collaborative Research Projects:

(Completed: 06 and Ongoing: 02 as Principal Investigator)

Sr. No.	Title of Project	Grant	Granting Agency	Date of start	Date of Completion
Completed					
01	Fabrication and Characterization of metal/ high-k/passivated compound semiconductor gate stacks	** INUP Collaborative	CEN, IITB Mumbai	Jan-2019	May-2019
02	Fabrication and characterization of High-k Dielectric thin films based MOS structures deposited by indigenously developed PEALD			Jan 2017	June 2017
03	Fabrication and characterization of silica aerogel low-k based MIS structures			Feb. 2016	June-2016
04	Characterization of Ge/SiC high-k deposited thin films for advanced CMOS technology			2015	2015
05	Fabrication and characterization of Ge/ Oxide/Metal gate stacks			2014	2014
06	Fabrication and characterization of novel metal gate High-k based MOS capacitors for future ULSI technology			2009	2011
07	Fabrication and characterization of novel "Ge/high-k/capping layer/ Metal (bilayer) Gate stacks" for advanced CMOS technology.			2012	2013
08	Characterization of surface modified low-k thin films for ILD applications in Nanoelectronics			2012	
09	Investigation of radiation effect on low dielectric thin films for CMOS/VLSI technology	*IUAC Collaborative	IUAC, New Delhi	2010	2012
10	Study of radiation effect on dielectric thin films for CMOS/ULSI technology	*IUAC Collaborative		Mar. 2015	June-2017

***IUAC Collaborative:** Ion irradiation and characterization facilities along with TA/DA, accommodation of PI and research students.

****INUP Collaborative:** Fabrication and characterization facilities along with recurring expenses, TA/DA, accommodation of PI and research students.

d) Departmental Projects:

(Ongoing: 1 as Deputy Co-ordinator)

Sr. No.	Title of Project	Project Expenditure (Rs. In Lacs)	Granting Agency	Date of start	Date of Completion
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Ongoing					
01	UGC SAP-DRS-III School of Physical Sciences, North Maharashtra University, Jalgaon.	51.50	UGC, New Delhi	Apr. 2016	March 2021
Total amount received		Rs. 51.50 Lacs(Rupees fifty one lacs fifty thousand only)			

e) Institutional Projects (coordinator):
(Ongoing: Rashtriya Uchchatar Shiksha Abhiyan (RUSA) Co-ordinator at NMU up to Jan-2017)

Sr. No.	Title of Project	Project Expenditure (Rs. In Lacs)	Granting Agency	Date of start	Date of Completion
01	RUSA Grant	2000.00	MHRD, New Delhi	Apr. 2015	
Total amount received		Rs. 2000.00 Lacs (Rupees twenty crores only)			

International Research Collaborations:

1. Prof Ding and Prof Xin Ping Qu, School of Microelectronics, Fudan University, Shanghai, China(**ongoing**)
2. Prof He Zhiwei, College of Science, China Agricultural University, Beijing, China (**ongoing**)
3. Prof Jing Zang, Deptt of Microelectronics, NCUT, Beijing, China(**ongoing**)
4. Prof. Ir. Dr. Cheong Kuan Yew, School of MMRE, University Sains Malaysia, Malaysia.(**ongoing**)
5. Prof. Terence K.S. Wong,School of EEE,Nanyang Technological University, **Songapore**
6. Prof. Mikhail Baklanov, North China University of Technology, Beijing, **China(ongoing)**.
7. Prof. Yee-Wen Yen, National Taiwan University of Science & Technology, Taipei, **Taiwan**.
8. Prof. Ri-ichi Murakami, National Taiwan University of Science & Technology, Taipei, **Taiwan**.
9. Prof. Dr. Thomas Schroeder, IHP Microelectronics, Frankfurt, **Germany**.
10. Dr. PankajKoinkar, Graduate School of Science and Technology, Tokushima University, **Japan(ongoing)**.
11. Prof. Jin-Ping Ao, Graduate School of Science and Technology, Tokushima University, **Japan**.
12. Prof. Brian J. Thibeault, ECE Department, University of California, Santa Barbara, CA, **USA(2010 - 2015)**
13. Prof. Nakatsuka, Graduate School of Engineering, Nagoya University, Nagoya,**Japan(2009-2013)**.

➤ **National Collaborations (ongoing):**

1. CEN (Center Of Excellence in Nano-electronics), IIT Bombay, Powai, Mumbai under Indian Nano-electronics User Programme (**INUP**).
2. Dr. K. Asokan, Inter University Accelerator Center (**IUAC**), New Delhi.
3. Prof. M. A. More, SavitiribaiPhule Pune University, Pune.
4. Prof. M. D. Shirsath, Dr. BAMU, Aurangabad.

➤ **Scientific Contribution :**

As an outcome of exposure/expertise gained through various research project execution and visits abroad the '*Materials and Devices Laboratory for Nano-electronics*' (**MDLN**) has been established at KBCNMU, Jalgaon.

Developed well equipped MDLN lab through **Eight** (7completed and 1 ongoing) major research projects worth **Rs. 2.87 Crore** funded by different funding agencies i.e. **UGC, CSIR, SERB, DST, Nano- Mission-DST** etc. major research area includes low-k, high-k thin film

growth and characterization, fabrication of MIS structures, Novel high-k / Metal Gate stacks MOS capacitors for advanced CMOS technology for future nano-electronics. Up till now **205** research papers have been published/presented by our research team in National/International journals/Conferences of high repute. I have applied for one patent on indigenously developed **Plasma Enhanced Atomic Layer Deposition (PEALD)** system. Under the guidance of Prof. Mahajan **09** students have completed their **Ph. D.** degrees, **02** students awarded **M. Phil** degree and **01** student has submitted thesis and **04** students are currently working for their **Ph.D.** degree.

MDLN Laboratory of Prof Mahajan is having following sophisticated deposition and characterization facilities in *Class 10000 clean room*

- Semiconductor (CV/IV) characterization system with probe station (procured through DST-FIST project fund)
- Indigenously developed Plasma Enhanced Atomic Layer Deposition (**PEALD**) system through Nano mission funded project
- E-beam Evaporator (Milman, India) through UGC funded , Project
- Rapid Thermal Processing (**RTP**) Unit through UGC funded , Project
- FTIR Spectrometer (Model Nicolet 380) through CSIR funded project
- Photo lithography setup
- Contact Angle Measurement System (Apex Instrumentation) through DSt. Women Scientist-A Project

Other part of the Laboratory

- Super Critical Drying Setup (Amar Equipment Ltd. India) through SERB, DST funded project
- Spin Coater (Milman, India) CSIR funded project
- Viscometer (Brookfield, USA) Departmental funds
- Chemical Treatment Bench , DST project
- Reflux set up with water distillation plant.

➤ **No. of Students supervised for Ph.D. / M. Phil.:**

Ph. D. Degree awarded : 10		working : 04		
Sr. No	Name of Ph. D. Student	Ph. D. Thesis Title	Year Registration	Year Award
01	Dr. Bhavana N. Joshi	Growth and characterization of Low-k Dielectric Thin Films for VLSI Applications	2006	2010
02	Dr. Yogesh S. Mhaisagar	Surface modification and electrical characterization of porous low-k thin film for nanoelectronics applications	2009	2014
03	Dr. Anil G. Khairnar	Deposition and characterization of High-k Dielectric Thin Films for MOS capacitors	2011	2015
04	Dr. Ravindrakumar G. Bavane	Synthesis and characterization of thin films of conducting polymer for gas sensing applications	2007	2015
05	Dr. Anil S. Gaikwad	Synthesis and characterization of silica aerogel thin films as Inter Layer Dielectrics (ILD) in ULSI circuits.	2013	2017
06	Dr. Vilas S. Patil	Structural and electrical characterization of Atomic Layer Deposition (ALD) System deposited High-k films based	2013	22/01/2019

		MOS devices for advanced CMOS technology.		
07	Dr. Khushabu S. Agrawal	Deposition of rare earth oxides by ALD and its applications for alternative gate stack devices.	2013	21/05/2019
08	Dr. Viral N. Barhate	Comparative study of PEALD deposited high-k dielectric thin films for ULSI applications.	2014	30/12/2019
09	Dr. Swati Gupta	Investigation of nanoporous low-k dielectric thin films: A comparative study	2018	12/05/2022
10	Mr. Sumit R. Patil	Investigation of novel high-k nanolaminates for MIM capacitors.	2017	31/01/2023
11	Ms. Deepashri Torawane	Fabrication and Characterization of 2D transition metal dichalcogenides (TMDs) based metal oxide semiconductor devices	2018	On going
12	Vaibhav Y. Borokar	Investigation of novel 2D/ high-k dielectric gate stack for electronics and optoelectronics applications	2020	On going
13	Naresh Chand	Synthesis and Characterization of High-k materials for various electronics application	2018	On going
14	Pankaj Waghmare	Deposition and characterization of various High-k dielectric ultrathin films by PEALD	Registration in progress	

• **M.Phil. Degree awarded : 02**

Sr. No.	Name of M. Phil. Student	Thesis Title	Year of Degree Awarded
01	Mr. Anil Patil	Growth and characterization of High k Gate dielectric thin films	2009
02	Mr. AbhayShrivas	Synthesis and characterization of Conducting Polymer For Electronics Applications	2009

Students Guided (M. Sc. /M. Tech. Projects) :70+
M. Sc. : 60+
M. Tech. : 10+

➤ **Patent :**

No.	Title	Inventors	Year
01	Plasma enhanced atomic layer deposition system and method of use	Ashok M. Mahajan, Vilas S. Patil and Lalit S. Patil	Feb. 2016 (Patent under examination, Patent No. 201621006604)

➤ **Memberships and Research IDs:**

- Semiconductor Society of India (Life Member).
- IEEE ED Society.
- **Scopus Author ID:** 55185022300
- **ResearcherID:** A-4812-2016
- **Orcid ID:** 0000-0003-4212-299X

- <https://scholar.google.co.in/citations?user=qU9g8hYAAAAJ&hl=en>

➤ **Research Publications:**

- **Citation Indices** (From Google Scholar updated on **14th Feb-2023**)

	All	Since 2018
Citations	631	298
h- Index	12	10
i10- Index	15	10

Published / submitted / accepted / presented in journals / conferences : **209**

- **Journals** : **62**

International (SCOPUS) : Published - 56, In Review-02
Other than SCOPUS : Published- 04

- **Conferences** : **141**

International: Attended/presented papers/ published in proceedings : **79**
National: Attended/presented papers/published in proceedings : **62**

- **Book chapters** : **06**

Journal Publications National/International (Scopus):

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95. Vilas S. Patil, Viral N. Barhate, Khushabu Agrawal, Sumit R. Patil and **A. M. Mahajan** “Optimization of process parameter of indigenously developed Plasma Enhance Atomic Layer Deposition System for the growth of High-k nano thin film”, presented in 8th International Conference on Advanced Materials Development and Performance (AMDP 2017) held at IITM Pune, Organized by Savitribai Phule Pune University, Pune during 11th to 15th July 2017.
96. Viral N. Barhate, Sumit R. Patil, Khushabu Agrawal, Vilas S Patil and **A. M. Mahajan** “Spectroscopic study of La₂O₃ thin film deposition by indigenously developed Plasma Enhance Atomic Layer Deposition System (PEALD)”, presented in 8th International Conference on Advanced Materials Development and Performance (AMDP 2017) held at IITM Pune, Organized by Savitribai Phule Pune University, Pune during 11th to 15th July 2017.
97. Anil Gaikwad, Swati A. Gupta and **Ashok M. Mahajan** “Synthesis of silica nanoparticles using solution base reflux method”, presented in 8th International Conference on Advanced Materials Development and Performance (AMDP 2017) held at IITM Pune, Organized by Savitribai Phule Pune University, and Pune during 11th to 15th July 2017.
98. Swati A. Gupta, Anil Gaikwad and **Ashok M. Mahajan** “Silica Aerogel low-k Film towards Interlayer Dielectrics (ILD) Application”, presented in 8th International Conference on Advanced Materials Development and Performance (AMDP 2017) held at IITM Pune, Organized by Savitribai Phule Pune University, and Pune during 11th to 15th July 2017.
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100. Anil G. Khairnat, Khushabu S. Agrawal, Vilas S. Patil, Rahule S. Salunke, Yogesh S. Mhaisagar and **Ashok M. Mahajan** “Physical characterization of Hafnium for CMOS Technology”, presented and published in National Conference on “Electronics Materials Thin Film and its Applications” (NCEMTFA), speed journal of research in electronics II, 10-12, (2016) to held at Jalgaon, Maharashtra, India during 9th to 10th December 2016.
 101. Vilas S. Patil, Khushabu S. Agrawal, and **Ashok M. Mahajan** “PEALD ZrO₂ thin film MOS capacitor fabricated on Surface Passivated Germanium for CMOS applications” presented in National Conference on “Electronics Materials Thin Film and its Applications” (NCEMTFA) (2016) to held at Jalgaon, Maharashtra, India during 9th to 10th December 2016.
 102. Anil Gaikwad, Swati A. Gupta, and **Ashok M. Mahajan** “Silica Aerogel low-k Film as Interlayer Dielectrics: Review” presented in National Conference on “Electronics Materials Thin Film and its Applications” (NCEMTFA) (2016) to held at Jalgaon, Maharashtra, India during 9th to 10th December 2016.
 103. Anil Gaikwad, Swati A. Gupta, and **Ashok M. Mahajan** “Synthesis and characterization of Silica nanoparticles” presented in National Conference on “Electronics Materials Thin Film and its Applications” (NCEMTFA) (2016) to held at Jalgaon, Maharashtra, India during 9th to 10th December 2016.
 104. Anil S. Gaikwad, Swati A. Gupta and **Ashok M. Mahajan** “Sol-gel deposited xerogel and aerogel low-k films’, delivered short invited talk in Second International Conference on Advanced Materials for Power Engineering (ICAMPE-2016) held during **011th-13th Nov. 2016** at Mahatma Gandhi University, Kottayam, Kerala, India.
 105. Swati A. Gupta, Anil S. Gaikwad, and **Ashok M. Mahajan** ‘Porogen based porous low-k films for nanoelectronics’, delivered short invited talk in Second International Conference on Advanced Materials for Power Engineering (ICAMPE-2016) held during 11th-13th Nov. 2016 at Mahatma Gandhi University, Kottayam, Kerala, India.
 106. Khushabu Agrawal, Vilas S Patil, and **A. M. Mahajan** “Estimation of metal semiconductor work function difference Ge MOS capacitors with HfO₂/Al gate stack”, , presented in University level research festival “Avishkar 2015”, presented at NMU Jalgaon during 22nd - 23rd December 2015. (**Recipient of “First Price Award in oral presentation”**)
 107. Vilas S Patil, Khushabu Agrawal, Rahul S. Salunke, Anil G. Khairnar and **A. M. Mahajan** “High permittivity HfO₂ thin film on surface passivated germanium”, presented in 18th International Workshop on Physics of Semiconductor Devices (IWPSD-2015) held at Indian Institute of Science Bangalore, Karnataka, India, during 7th -10th Dec 2015 abstract published on pp. 279.
 108. Khushabu Agrawal, Vilas S Patil, Viral N. Barhate, Anil G. Khairnar and **A. M. Mahajan** “Interfacial Properties of ALD-HfO₂ deposited surface nitride germanium (111)”, presented in 18th International Workshop on Physics of Semiconductor Devices (IWPSD-2015) held at Indian Institute of Science Bangalore, Karnataka, India, during 7th -10th Dec 2015 abstract published on pp. 271.
 109. Khushabu Agrawal, Vilas S Patil, Anil G. Khairnar and **A. M. Mahajan** “Hafnium oxide deposited by ALD on nitride passivated Ge (100) substrate”, presented and published in Material Research Symposium O (e-MRS-2015) held at Warsaw University of Technology during 15th-18th Sept. 2015.
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115. K. S. Agrawal, V. S. Patil, A. G. Khairnar, **A. M. Mahajan** “Metal Organic Decomposed Cerium Dioxide High-k Thin films for CMOS Applications” presented in National Conference on Advances in Electronics and Interdisciplinary Applications (NCAEIA-2014) held at Ferguson College, Pune during 19th-20th Sept, 2014.
116. Vilas S Patil, Viral N Barhate, Anil G Khairnar and **A M Mahajan** “Atomic layer deposition system for controlled deposition of thin films in CMOS technology”, presented in NCRTMPA-2014 held at Shankarlal Khandelwal Arts, Science and Commerce College, Akola (MS) on **19th March 2014**.
117. Pranita A Deshmukh, Khushabu S Agrawal, Anil G Khairnar and **A M Mahajan** “Comparative study of current conduction mechanism in high-k dielectric thin films deposited on silicon substrates”, presented in NCRTMPA-2014 held at Shankarlal Khandelwal Arts, Science and Commerce College, Akola (MS) on 19th March 2014
118. **A. M. Mahajan**, D. G. Hundiware, S. U. Meshram A talk entitled “Leadership role of North Maharashtra University promoting innovation in engineering education”, delivered at University of Tokushima, Japan during “International symposium on global engineering education” during **3rd-5th March 2013**.
119. Anil G. Khairnar, Yogesh S. Mhaisagar and **A. M. Mahajan**, “Surface passivation of germanium using NH₃ ambient in RTP for high mobility MOS structure”, Presented in International Symposium on Semiconductor Materials and Devices (ISSMD-2) held at University of Jammu, India during 31st Jan-2nd Feb 2013.
120. Yogesh S. Mhaisagar, Anil S. Gaikwad, Anil G. Khairnar, and **Ashok M. Mahajan**, “Surface Modified Silica Low-K Thin Films for ILD Application in ULSI Circuits, presented in International Symposium on Semiconductor Materials and Devices (ISSMD-2) held at University of Jammu, India during 31st Jan-2nd Feb 2013.
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 124. Bhavana Joshi, Yogesh Mhaisagar and **A.M. Mahajan**, "Electrical characterization of hybrid low dielectric thin films for ILD applications" presented in XVI International Workshop on Physics of Semiconductor Devices (IWPSD 2011), held at IIT, Kanpur during 19-22 December 2011.
 125. Yogesh S. Mhaisagar, Renuka Kawishwar, Bhavana N. Joshi, and **A.M. Mahajan**, “Deposition of porous low-k thin films using Tween 80 porogen for ILD application in ULSI circuits” XVI International Workshop on Physics of Semiconductor Devices (IWPSD 2011), will be held at IIT, Kanpur during 19th-22nd December 2011.
 126. **A.M. Mahajan**, Anil G. Khairnar, Brian J. Thibeault “Fabrication and Electrical characterization of novel Pt/Ti/ALD ZrO₂/ n-Ge MOS capacitors”, , presented in ICFSI-13 held at Prague, Czech Republic, during 3rd-8th, July- 2011
 127. Bhavana N. Joshi and **A. M. Mahajan**, “Electrical characterization of metal-insulator-semiconductor capacitor with low-k hybrid thin films for ULSI applications”, presented in International Conference on Electronics Engineering and Signal Processing (EESP 2011) held at Maldives during 27th -29th May 2011.
 128. Naeem H. Momin, Megha B. Patil, Anil G. Khairnar, Pravin Tirmali, **A.M. Mahajan**, "Cerium oxide dielectric thin film for Nanoelectronics devices", Presented and published in national conference NCNN-2011 , North Maharashtra University, Jalgaon held on 19th March 2011.
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178. Bhavana N. Joshi and **A.M. Mahajan**, "Effect of chamber pressure on the properties of PECVD grown SiO₂ thin films", presented in Raman Memorial Seminar-2006 held at North Maharashtra University, Jalgaon on 28th Feb 2006, Abstract Published in abstract book on P. No. 09.
179. Manisha Deshpande, Bhavana N. Joshi and **A M Mahajan**, "PECVD grown ZrO₂ thin films for optical integrated circuits", presented in NSIAE-2006 held at A,S&C College, Chopda During 28th -29th Jan-2006, Published in Souvenir on pp-101, PP17.
180. Priti Borole, Bhavana N. Joshi and **A M Mahajan**, "Growth of SiCOH thin films by PECVD for interlayer applications", presented in NSIAE-2006 held at A,S&C College, Chopda During 28th -29th Jan-2006, Published in Souvenir on pp-71, CP36.
181. Bhavana N. Joshi, Narendra L. Jaware, Savita Firke and **A M Mahajan**, "Growth of Zn_xSi_{1-x} thin films as buffer layer in solar cell", presented in NSIAE- held at A, S&C College, Chopda During 28th -29th Jan-2006, published in Souvenir on pp-101, pp16.
182. Soumitra Chandra and **A M Mahajan**, "Correlator IC for detection of signal in noise", presented in NSIAE-2006 held at A,S&C College, Chopda During 28th -29th Jan-2006, Published in Souvenir on pp-99, PP12.

183. Sachin Chandra and A M Mahajan, "A controller IC for bottling system", Presented in NSIAE-2006 held at A, S&C College, Chopda During 28th -29thJan-2006, published in Souvenir on pp-70, CP35.
184. Prajakta Kulkarni, Rehan Ahmed, Mukesh Patil & **A.M. Mahajan**, "High performance encoder with priority look ahead using VHDL tools for appliances control", presented in NSIAE-2006 held at A, S&C College, Chopda During 28th -29thJan-2006, published in Souvenir on pp-98, PP11.
185. Himali Attarde, Milind Bharambe, Vikram Khachane and **A M Mahajan**, "Voice controlled electrical equipment with real time DSP", presented in NSIAE-2006 held at A, S&C College, Chopda During 28th -29thJan-2006, Published in Souvenir on pp-75, CP45.
186. Bhavana N. Joshi and **A M Mahajan** "Chalcogenide thin films for photonics applications", , presented in National Seminar on "Materials for Advanced Technologies (NASMAT-2006) held at Shivaji University, Kolhapur during 23rd -26thJan-2006, Published in proceedings on pp-09-11.
187. Bhavana N. Joshi, Savita Firke and **A M Mahajan**, "Preparation and characterization of CdxS1-x thin films grown by CBD for absorbers in solar cells", Presented in NASMAT-2006 held at Shivaji University, Kolhapur during 23rd -26thJan-2006, Published in abstract book on pp-114.
188. Vaishali Salunke Pankaj Verma, Jayesh Mahajan, Sonali Jain and **A M Mahajan**, "Characterization of CdxS1-x thin films grown by CBD technique", International topical conference on optics and Photonics held at Department of Applied Physics, University of Calcutta, 92 A.P.C. Road, Kolkata - 700 009 during Feb-2005, Published in abstract book.
189. Pankaj Verma, Vaishali Salunke, Arjun Ransing and **A M Mahajan** , "Preparation and characterization of Chalkogenide thin films for Photonics applications", XXX OSI Symposium on Optics and Optoelectronics (SOOP-2005) held during 19th -21stJan-2005 at NPL, New Delhi, Published in Abstract book on pp 153.
190. Sadique Shaikh, **A M Mahajan** and D K Gautam, "Mathematical modeling and analysis of Hubburd U for quantum device applications", National Laser Symposium (NLS-2004) held at BARC, Mumbai during Jan-2005, Published in Proceeding pp-326-329.
191. **A M Mahajan**, L.S.Patil & D K Gautam, "Influence of process parameters on the properties of PECVD deposited SiO₂ films", Presented in an international conference ICMCTF-2004 held at San Diego, CA, USA during 19th -23rdApril -2004., Published in Abstract book on pp59-60.
192. **A M Mahajan**, M. D. Joshi & D K Gautam, "Effect of temperature on the deposition kinetics of SiO₂ films grown by PECVD system", Presented in an international conference ICOT-2004, Published in Proceeding pp-510-515.
193. **A M Mahajan**, Jyotsna Rane & D K Gautam, "Plasma Diagnostic study in a capacitive TEOS- PECVD system", Presented in an international conference ICOT-2004, Published in Proceeding pp-503-509.
194. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, "High growth rate PECVD system for the deposition of SiO₂ Films", Presented as an invited talk in an international conference ICOT-2004 held at, NMU, Jalgaon during 12th to 14thJanuary-2004., Published in Proceeding pp-78-88.
195. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, "Growth of SiO₂ films using Indigenously developed PECVD system for microelectronics applications" , Presented in an international conference ICMCTF-2003 held at San Diego, CA, USA during 28thApril to 2ndMay-2003., Published in Abstract book on pp32-33.
196. R. S. Dubey, M.P.Bhole, **A M Mahajan** and D K Gautam, "Analysis of deposition kinetics & apparent activation energy for the growth of SiO₂ films using TEOS-PECVD

- system”, Presented in COPE-03, held at NSIT, New Delhi during 6-8th January –2003, Published in proceeding pp-146-149.
197. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, “Effect of temperature variation on the growth rate of SiO₂ films deposited by PECVD system”, Presented in XXVIII Optical Society of India Conference on Optics and Photonics in Engineering (COPE-03), held at NSIT, New Delhi during 6th-8th January –2003, Published in Proceeding pp-78-83
 198. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, “Effect of O₂/TEOS flow rate ratio on the growth of SiO₂ films using PECVD system”, Presented in an international Conference “PHOTONICS-2002” at TIFR, Mumbai, during 16th-18th, Dec.2002, Published in Abstract book on pp286.
 199. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, “Optimization of process parameters for the growth of SiO₂ film using TEOS-PECVD system”, Presented in the national symposium on instrumentation (NSI-27) during Oct-2002, Published in Abstract book on pp-121.
 200. “Study of optical characteristics of Bio membrane for designing and fabrication of Bio sensors for Bio-medical applications”, A N Ardad, **A M Mahajan**, M D Shirsath, Presented in international Conference Broad Band Optical Fiber Communication Technology (BBOFCT-2001), Published in Proceeding pp-369-373.
 201. D S Patil, **A M Mahajan** and D K Gautam, “Effect of channel width on the field spreading in channel Substrate planer blue laser diode”, Presented in international Conference “BBOFCT-2001”, Published in Proceeding pp-239-242.
 202. **A M Mahajan**, L S Patil, J P Bange and D K Gautam, “Effect of Chamber pressure variation on the R. I. of SiO₂ films deposited by PECVD”, Presented in international Conference “BBOFCT-2001” at North Maharashtra University, Jalgaon during 5th-7th Dec.2001, Published in Proceeding pp-283-286.
 203. L. S. Patil, **A. M. Mahajan**, J.P. Bange, and D. K. Gautam, “Comparative study of SiO₂ film grown by thermal CVD and PECVD”, Presented at National Symposium on Science and Technology of Vacuum and thin films at IISc Bangalore, held during Sept-5-7, 2001, Extended abstract published in proceedings as pp19.
 204. **A. M. Mahajan**, L. S. Patil, J.P. Bange and D. K. Gautam, “Design and fabrication of TEOS-PECVD System for high growth rate”, Presented at National Symposium on Science and Technology of Vacuum and thin films at IISc Bangalore, held during Sept- 5th-7th, 2001, Abstract published in proceedings as pp18.
 205. **A. M. Mahajan**, L. S. Patil, J.P. Bange, and D. K. Gautam, P “Growth and Characterization of SiO₂ films for the fabrication of Optical Waveguides”, resented in 2nd International Conf. and XXVII Annual Convention of Opt. Soc. India (OPTONICS 2001),, held at Thiruvananthapuram during 27th-29th August-2001 Extended abstract published in proceedings on page 8 & 9.
 206. A. B. Patil, **A. M. Mahajan** and D. K. Gautam, “Simulation of Process parameters of PECVD machine,” Presented in “National workshop/symposium on WDM technology” at North Maharashtra University, Jalgaon on 22/03/2001, First prize of research paper Award winner.
 207. **A M Mahajan**, L S Patil, J. P. Bange and D K Gautam, “Development of TEOS-PECVD machine for the growth of SiO₂ films for optoelectronics applications”, Presented in “National symposium on WDM technology ” at North Maharashtra University Jalgaon on 22/03/2001.
 208. **A M Mahajan**, L S Patil, J P Bange & D K Gautam, “Development of TEOS-CVD machine for the growth of SiO₂ films for optoelectronics applications”, Presented in “Research Symposium on Recent Trends in Electronics and information Technology” at North Maharashtra University, Jalgaon on 28/02/2000.

209. **A.M. Mahajan** & A. B. Kadam , “Performance of active-R Filter in presence of positive feedback”, Presented in the National Symposium on instrumentation organized at S. V. University, Tirupati during 09/01/94 to 12/01/94., Abstract published in the proceeding as C-67 on page 38.

Books Edited/Published:

International/National conference Proceedings co-edited: 03

- 01) Abstract book of National conference on “Materials & Devices for Future Technology, North Maharashtra University, Jalgaon held on 7th March 2011 edited by **A.M. Mahajan**.
- 02) Proceedings of an International conference BBOFCT-2001 held at, NMU, Jalgaon during 5th–7th December-2001, Co-edited by **A.M. Mahajan**.
- 03) Proceedings for an International conference ICOT-2004 held at, NMU, Jalgaon during 12th to 14th January-2004, Co-edited by **A.M. Mahajan**.

➤ Academic (Organizational) Involvements:

1. Chairman:

1. Board of Examiners and paper setters for M.Sc. Electronics, North Maharashtra University, Jalgaon since July-2002 to July-2005 and 2009-2010.
Local Inquiry Committee (LIC) to visit various colleges of NMU

2. Secretary:

1. National workshop on Optical Integrated Circuits and systems (**OICS- 2004**) Organized by Department of Electronics, North Maharashtra University, Jalgaon during 29th-30th July-2004
2. International Conference entitled “International Conference on Optoelectronics Technology (**ICOT-2004**)” Organized by Department of Electronics, North Maharashtra University, Jalgaon during 12th-14th January 2004.
3. International Conference entitled “Broad Band Optical Fiber Communication Technology (**BBOFCT-2001**)” Organized by Department of Electronics, North Maharashtra University, Jalgaon during 3-7, Dec-2001

3. Co-ordinator:

1. One Week Faculty Development Program(FDP) on **Hands on Training on High End Research Equipment (HT-HERE)** during 21st to 26th Nov-2022 jointly organized by MSFDA, Pune and KBCNMU, Jalgaon
2. 2 days F2F training batch for Capacity Building for faculty members of KBCNMU by EU trainer from Cyprus on “**Assessment and Grading**” during 29th and 30th August-2018 under CABGIN project.
3. 2 days F2F training batch for Capacity Building for faculty members of NMU by EU trainer from Poland on “ **Diversity management at workplace in the context of HEIs**” during 19 and 20th July-2018 under CABGIN project.
4. CABGIN Project Management Board (**PMB**)-1 Meeting during **14th – 17thFeb. 2018** at North Maharashtra University, Jalgaon, Jointly organized by WrUST, Wraclaw and North Maharashtra University.
5. M.Sc. Electronics examination of North Maharashtra University, Jalgaon, June 2009 to Dec. 2011.
6. Recent trends in Electronic devices and materials (**RTEDM-2007**) organized by Dept. of Electronics, North Maharashtra University, Jalgaon on 21st March 2007
7. National Seminar on Intellectual Property Rights (**NSIPR-2005**) Organized by North Maharashtra University, Jalgaon to be held during 27th-28th, Sept-2005.
8. **SEC-2004**, Organized by Department of Electronics, North Maharashtra University, Jalgaon on 1st March-2004

4. Convener:

1. **4th infoday** of ERASMUS+ cofounded CABCIN project held on **11th July-2019**
2. **3rd infoday** international seminar on "Capacity building for quality enhancement in Higher Education" under the aegis of ERASMUS+ cofounded CABCIN project held on **10th May-2019**
3. **2nd infoday** of ERASMUS+ cofounded CABCIN project held during **Oct/Nov-2018** in four different colleges.
4. **1st CABCIN INFO Day Seminar** on "Technology Allied Capacity Building in Higher Education: A Paradigm Shift" at North Maharashtra University, Jalgaon" on **28th March 2018**.
5. National conference on "Materials & Devices for Future Technology, organized by School of physical Sciences, North Maharashtra University, Jalgaon on **7th March 2011**.

5. Patron:

1. International Conference on Cross cultural political and economic dimension of global business North American and Asian perspective, **27th -28th May-2016, Cetys University, Mexico (Jointly organized by NMU & Cetys)**.
2. National conference on Algebra Analysis and functional mathematics (**NCAAFM-2016**), **29th-30th Jan. 2016**, School of Mathematical Sciences, North Maharashtra University, Jalgaon, India.
3. One day National Workshop on 'Advances in Materials Processing', **8th March 2014**, School of Physical Sciences, North Maharashtra University, Jalgaon, India.
4. National conference on Managing Economic Downturn, **2nd-3rd Nov. 2012**, School of Management Studies, North Maharashtra University, Jalgaon, India.

6. Co-Patron:

1. International Conference 3rd Global Sustainable Biotech Congress 2014 (GSBC-2014), 1st-5th December 2014, held at North Maharashtra University, Jalgaon, India.
2. International Opportunities for Latest Developments in Chemistry and Technology – 2014 (GOLD-CT-2014), 6th-8th Feb. 2014 held at North Maharashtra University, Jalgaon, India.
3. National conference on 'Application Oriented Hindi and Media Writing', 26th Feb. 2014, School of Language Studies and Research Centre, North Maharashtra University, Jalgaon, India.

7. Executive Member:

1. Invited as an expert member of the international advisory committee for 2nd International workshop on "Materials for Advanced Interconnects and Packaging" held at North China University of Technology (NCUT) during **15th Oct. – 17th Oct. 2017 Beijing, China**.
2. National conference on the present scenario of Indian higher education system: strength, weakness opportunities and threats, **13th-14th August 2015**, Vasantrao Naik Arts, Science and Commerce College, Shahada, Dist. Nandurbar, India.

➤ **Workshops/Conferences/Seminar/Schools Attended:**

- 1) Participated as a **Member, Advisory Board** in International conference on Current Trends in Physics and Photonics-(ICCTPP)-2022-, held during **9th -11th June-2022** at School of Physics, MIT-WPU, Pune.
- 2) A second webinar on “Chips to Startup (C2S) Programme: Fostering Next Generation Capabilities Among Chip Designers For Making India Self-Reliant In Electronics System Design” organized by Ministry of Electronics & Information Technology (MeitY), Government of India, on 04th February 2022.
- 3) A webinar on “Chips to Startup (C2S) Programme: Fostering Next Generation Capabilities among Chip Designers for Making India Self-Reliant in Electronics System Design” organized by Ministry of Electronics & Information Technology (MeitY), Government of India, on 27th January 2022.
- 4) Participated in virtual international conference on **EMERGING TRENDS IN APPLIED SCIENCES**, organized by Veer Narmad South Gujrath University, Surat, **Gujarat, India** during **28 & 29th October-2021** and Plenary talk on “**Novel High-k/Metal gate stacks for advanced CMOS technology**” delivered
- 5) Participated in 2 days virtual Assessor’s Orientation Program (V-AOP) organized by NAAC, Bangalore during 22-23 July-2021.
- 6) CABGIN Project Management Board (PMB)-4 Meeting of European and Indian Universities during **16th – 19th Sept. 2019** at NOVA university, Lisbon, Portugal, Jointly organized by WrUST, Wraclaw and NOVA university, **Lisbon, Portugal**.
- 7) Participated in an International conference on capacity building in higher education institutions-**ICBHE-2019**, held during **5th -6th Sept-2019** at WUST, Wroclaw, **Poland**.
- 8) IEEE international conference **ICICDT-2019** attended on **18th and 19th June-2019** at **Suzhou, China** as an honored guest of Fudan University, Shanghai....
- 9) Participated in the “Professional development training program for Teachers” under the aegis of ERASSMUS+ funded consortium project ‘CABGIN’ under European Visiting Program(EVP) scheme at University of Ghent, Ghent, Belgium during **25th Feb- to 1st Mar-2019**.
- 10) CABGIN Project Management Board (PMB)-3 Meeting of European and Indian Universities during **4th – 6th Feb. 2019** at TUKE university, Slovakia, Jointly organized by WrUST, Wraclaw and TUKE university, **Kosice, Slovakia**.
- 11) 2 days F2F training batch for Capacity Building for faculty members of KBCNMU by EU trainer from Cyprus on “**Assessment and Grading**” during 29th and 30th August-2018 under CABGIN project attended/co-ordinated.
- 12) Participated on behalf of KBCNMU in Roundtable meeting of Maharashtra Public State University Representatives with Consulate of US and Representatives of US Institutions on “**Opportunities for Academic Linkages: Roundtable**” at US Consulate General’s Office BKC-Mumbai held on **24th August 2018**.
- 13) One Day IEEE IPR workshop 2018 on “**Patent Publishing in India - A Paradigm Shift for Innovation in Academics**” organized by IIT Mumbai on 23rd August-2018.
- 14) 2 days F2F training batch for Capacity Building for faculty members of NMU by EU trainer from Poland on “**Diversity management at workplace in the context of HEIs**” during 19 and 20th July-2018 under CABGIN project attended/co-ordinated.
- 15) 1 day symposium on (In Marathi) “**Vidnyan aani Tantradnyanachya aadhare sampatti nirmitti**” organized jointly by North Maharashtra University and Marathi Vidnyan Parishad, Maharashtra state, on 10th July-2018 at NMU, Jalgaon.

- 16) **1stCABCIN INFO Day Seminar** on “Technology Allied Capacity Building in Higher Education: A Paradigm Shift” at North Maharashtra University, Jalgaon” on 28th March 2018.
- 17) Workshop on “IPR issues in research” at Dr. Annasaheb G.D. BendaleMahilaMahavidyalaya, Jalgaon on **13th March 2018**.
- 18) CABCIN Project Management Board (PMB)-1 Meeting of European and Indian Universities during **14th – 17th Feb. 2018** at North Maharashtra University, Jalgaon, Jointly organized by WrUST, Wraclaw and North Maharashtra University.
- 19) WP3 meeting of Erasmus+ funded consortium project CABCIN during 24th – 26th January 2018 at WrUST, Wraclaw, Poland.
- 20) Maharashtra Rajya Marathi Vishwakosh and NMU organized “Abjaunsh Tantradnyan” workshop during 9th-10th Jan 2018 at NMU Jalgaon.
- 21) 2nd International workshop on “Materials for Advanced Interconnects and Packaging” held at North China University of Technology (NCUT) during 15th Oct.– 17th Oct. 2017 Beijing, China.
- 22) International workshop on ‘Establishment of Capacity Building Centers as a Sustainable Solution to Raise the Standards of Teaching Staff in Indian HEI’s CABCIN held at SAL Education, Ahmedabad, during 21st – 22nd Sept- 2017
- 23) International workshop on ‘Establishment of Capacity Building Centers as a Sustainable Solution to Raise the Standards of Teaching Staff in Indian HEI’s CABCIN held at Fredrick University, Cyprus during 06th – 07th July 2017.
- 24) International workshop on ‘Establishment of Capacity Building Centers as a Sustainable Solution to Raise the Standards of Teaching Staff in Indian HEI’s CABCIN held at Parul University, Vadodara during 20th – 22nd March 2017.
- 25) International workshop on “Materials or Advanced Interconnects” held at North China University of Technology (NCUT) during 29th Oct. -2nd Nov. 2016 Beijing, **China**.
- 26) **National Research and Academia Conclave: Towards a TB-Free India** held on **9th July 2016 at Trident-BandraKurla Complex, Mumbai** organized jointly by N M U Jalgaon, India and The **Union of South East Asia**.
- 27) Workshop under Higher Education Leadership Academy (HELA) organized by SPD, RUSA 8th -9th Jan.-2016, Mumbai, **India**.
- 28) E-MRS-2015 organized during 15-18 Sept. 2015 by European Materials Research Society at Warsaw, Poland.
- 29) West Zone Vice-Chancellor’s Meet held during **26th -27th Nov. 2015** at Kolhapur, **India** organized by AIU New Delhi.
- 30) New National Educational Policy, State level conference on 3rd Nov. 2015 at Sydenham College, Mumbai, **India** organized by govt. of Maharashtra (Higher & Technical Education Department).
- 31) Round Table Conference on ‘**Globalization of Higher Education in the State of Maharashtra: Way Forward**’ on 28th August 2015 at the Convocation Hall, Fort Campus, Mumbai, **India**.
- 32) All India Vice-Chancellors’ Meet under the aegis of All India Universities Association during **23rd -25th May-2015** at Lovely Professional University, Punjab, **India** as a representative of VC, NMU.
- 33) International Symposium on Global Engineering Education held during 19th to 20th March 2015 at University of Tokushima, **Japan**.
- 34) International Conference 3rd Global Sustainable Biotech Congress 2014 (GSBC-2014) during 1-5 December 2014 held at North Maharashtra University, Jalgaon, India.

- 35) International Conference on Energy, Environment and Sustainable Economy (ESEE 2013) held during 1st-3rd December, 2013 in Bangkok, **Thailand**.
- 36) “International symposium on global engineering education” at University of Tokushima, during 3rd-5th **March 2013 in Japan**.
- 37) Govt. of India MHRD organized international conference on community colleges, “Mainstreaming skills education: creating relevant human resource, during 6th -7th Feb. 2013”, at New Delhi, **India**.
- 38) 13th International Conference on the formation of Semiconductor interfaces (ICFSI-13) held during 3rd -8th July 2011 at Prague, **Czech Republic**.
- 39) International Conference on Electronics Engineering and Signal Processing (EESP 2011) held during 27th -29th May 2011 at **Maldives**.
- 40) National Conference on “Materials & Devices for Future Technology, held on 7th March 2011 North Maharashtra University, Jalgaon, **India**.
- 41) International Symposium on Semiconductor Materials and Devices (ISSMD 2011) held during 28th –30th Jan. 2011 at M. S. University of Baroda, Vadodara, **India**.
- 42) Material research symposium (MRS-2010) held during 5th -9th April 2010 at San Francisco, CA, **USA**.
- 43) National conference on Materials for Energy Storage and Conversion (NCMESC-2010) held during 23rd-24th Jan. 2010 at Department of Physics, Shri. Venkateshwara University, Tirupati, **India**.
- 44) International Winter School for Graduates (IWSG 2009) held during 30th Nov. - 5th Dec. 2009 at IIT Mumbai, **India**.
- 45) 2nd INUP workshop on nanofabrication technologies held at during 30th -31st May 2009 at IIT Mumbai, **India**.
- 46) IWDTF-08, International workshop on dielectric thin films for future ULSI technology held during 5th -7th Nov-2008 at Tokyo Institute of Technology, Tokyo, **Japan**.
- 47) One day workshop on accelerator based research on polymer science held on 25th August 2008 at Inter University Accelerator Center, New Delhi, **India**.
- 48) XIV International workshop on the Physics of Semiconductor Devices IWPSD 2007 held during 16th-20th Dec. 2007 at IIT, Mumbai, **India**.
- 49) 14th International conference on Physical Failure and Analysis (IPFA-2007) held during 11th -13th July 2007 at Bangalore, **India**.
- 50) Raman Memorial Seminar-2007 held on 28th Feb 2007 at North Maharashtra University, Jalgaon, **India**.
- 51) ICMNT-06, held during 19th -23rd Nov. 2006 at TiziOuzou, **Algeria**.
- 52) Pre seminar workshops on Sensors (NSPTS-11) held during 25th -26th Feb. 2006 at Department of Electronics, University of Pune, Pune, **India**.
- 53) NSIAE-2006 held during 28th -29th Jan. 2006 at A, S&C College, Chopda, **India**.
- 54) International conference ICMCTF-2004 held during 19th-23rd April -2004 at San Diego, CA, **USA**.
- 55) International conference ICOT-2004, held during 12th -14th Jan. 2004 at North Maharashtra University, Jalgaon, **India**.
- 56) International conference ICMCTF-2003 held during 28th April to 2nd May 2003 at San Diego, CA, **USA**.
- 57) XXVIII Optical Society of India Conference on Optics and Photonics in Engineering (COPE-03), held during 6th -8th Jan. 2003 at NSIT, New Delhi, **India**.

- 58) International Conference “BBOFCT-2001” during 5th -7th Dec. 2001 at North Maharashtra University, Jalgaon, **India**.
- 59) 2nd International Conf. and XXVII Annual Convention of Opt. Soc. India (OPTONICS 2001) held during 27th -29th Aug. 2001 at Thiruvananthapuram, **India**.
- 60) National Symposium on WDM Technology” held on 22nd March 2001 at North Maharashtra University Jalgaon, **India**.
- 61) Research Symposium on Recent Trends in Electronics and Information Technology” held on 28th Feb. 2000 at North Maharashtra University, Jalgaon, **India**.
- 62) National Symposium on instrumentation organized held during 9th – 12th Jan. 1994 at S. V. University, Tirupati, **India**.

➤ **Plenary/Invited/Popular/Honorary Talks Delivered: 51**

1. An invited talk on “**Review of Literature & Research: Basic Concepts & Its need, Literature Search**” for Ph.D. students of Science & Technology, Law and Library & information Science (interdisciplinary) faculties of KBCNMU, Jalgaon **during Pre-PhD Workshop-2023 on 6th February-2021**
2. Invited talk on “**Science day talk on nano materials and Devices**” delivered in Science day organized by Veer Narmad South Gujrath University, Surat, Gujarat, India during 28th & 29th October-2021
3. **Plenary** talk on “**Novel High-K/Metal Gate (HK/MG) Stacks for Advanced CMOS Technology**” delivered in “**Details of Lecturer in ECWW series weekend webinar**” organized by Siksha 'O' Anusandhan Deemed to be University Bhubaneswar, Odisha, **India** held on **22nd January 2022**.
4. **Plenary** talk on “**Novel High-k/Metal gate stacks for advanced CMOS technology**” delivered at virtual international conference on EMERGING TRENDS IN APPLIED SCIENCES, organized by Veer Narmad South Gujrath University, Surat, **Gujarat, India** during **28th & 29th October-2021**.
5. An expert talk on “**Research Paper Submission, Opportunity for Research and Research Publication**” delivered at G D Bendale College, Jalgaon on **22/10/2021**.
6. An invited talk on “**Novel High-k/Metal gate stacks (@MDLN) for advanced CMOS technology**” delivered at Tokushima University, Tokushima, JAPAN during **SAKURA science exchange workshop on 2nd March-2021 (online)**
7. An invited talk on “**Research: Basic Concepts & Literature Search**” For Ph.D. students of Science & Technology, Law and Library & information Science faculties of KBCNMU, Jalgaon **during Pre-PhD Workshop-2021 on 1st February-2021**.
8. An invited talk on “**Investigation of novel High-k/Metal gate stacks (@MDLN) for advanced CMOS technology**” delivered at **KLEF University, Vaddeswaram, Guntur, AP, INDIA** innational level Faculty Development Program (FDP) for Electronics Teachers/Professors on **16/09/2020(online)**.
9. A talk entitled “**Novel High-k.....**” on **15th November-2019** in Research group of Prof XinPing Qu at School of Microelectronics, Fudan University, **Shanghai, China**
10. Invited talk entitled “**Role of Internationalisation in Higher Education institutions in India with Reference to Kavayitri Bahinabai Chaudhari North Maharashtra University**” in International conference on capacity building in higher education institutions-**ICBHE-2019**, held during **5th -6th Sept-2019** at WUST, Wroclaw, **Poland**
11. A talk entitled “**Novel High-k/metal gate (HKMG) stacks for advanced CMOS technology**” on **17th June-2019** at School of Microelectronics, **Fudan University, Shanghai, China**.

12. Distinguished lecture on “internationalization in HEIs” at G H Raisoni, Sausar, dist **Chhindwara, Madhya Pradesh** (at Nagpur head quarter) on **20th May-2019**.
13. Invited talk for Master students entitled “Overview of an advanced CMOS technology (Micro to Nano electronics)” delivered at North China University of Technology (NCUT) on 23th Oct. 2018 Beijing, **China**.
14. A report for Master and Research Students entitled “High-k and Low-k ultra thin films based MOS devices for advanced CMOS technology” delivered at China Agricultural University (CAU), Beijing, **China** on 21nd Oct. 2018.
15. Invited talk for Master and Research Students entitled “Investigation of novel High-k/Metal gate stacks (@MDLN) for advanced CMOS technology” delivered at Institute of Microelectronics Chinese academy of Sciences (IMECAS), Beijing, **China** on 21nd Oct. 2018.
16. Invited talk for UG students entitled “Introduction to advanced CMOS technology” delivered at North China University of Technology (NCUT) on 19th Oct. 2018 Beijing, **China**.
17. Invited talk for UG students entitled “Introductory talk on digital logic system design and VHDL” delivered at North China University of Technology (NCUT) on 17th Oct. 2018 Beijing, **China**.
18. Invited talk for Master and Research Students entitled “Low-k and high-k materials and thin films” delivered at China Agricultural University, Beijing, **China** on 16th Oct. 2018.
19. Invited talk for Master and Research Students entitled “Low-k and High-k materials and thin films for ULSI technology” delivered at North China University of Technology (NCUT) on 16th Oct. 2018 Beijing, **China**.
20. A report entitled “deposition and characterization of Dielectric thin films for advanced CMOS technology” delivered at China Agricultural University (CAU), Beijing, **China** on 14th Oct. 2018.
21. Delivered talk on “Low-k and High-k based MOS Devices for advanced CMOS technology” in the Department of Materials Science and Engineering, NTUST, **Taipei, Taiwan** on 25th May-2018.
22. Speaker for state level ‘LONAR SCIENCE FESTIVAL’ at Late Ku. Durga K. Banmeru Science College, Lonar & Swami Ramanand Teerth Marathwada University, Nanded during **27th to 28th Feb. 2018**.
23. Keynote speaker on “IPR issues in research” at Dr. Annasaheb G.D. Bendale Mahila Mahavidyalaya, Jalgaon on **13th March 2018**.
24. Invited talk entitled “High-k/low-k thin films based MOS devices for advanced CMOS technology” at Department of Materials Science and Engineering, NCTU, Hsinchu, **Taiwan** on 20th Oct. 2017.
25. Invited talk entitled “Dielectric thin films based MOS devices for advanced CMOS technology” delivered at Applied Physics department, China Agricultural University, Beijing, **China** on 17th Oct. 2017.
26. Invited talk entitled “Spin on low-k thin films for inter layer dielectric (ILD) applications” delivered at North China University of Technology (NCUT) during 15th Oct. – 17th Oct. 2017 Beijing, **China**.
27. Invited talk entitled “Development of Low-k Film in North Maharashtra University delivered at North China University of Technology (NCUT) during 29th Oct. - 2nd Nov. 2016 Beijing, **China**.

28. A talk entitled, "International collaborations of North Maharashtra University: a case of European educational institutions", delivered at School of Physical Sciences, North Maharashtra University, Jalgaon **4th October 2015**.
29. A talk entitled, "Promoting internationalization in higher education at North Maharashtra University", delivered in International Symposium on Global Engineering Education held at University of Tokushima, Tokushima, Japan during 19th-20th March 2015.
30. A talk entitled, "Novel Dielectric Materials and MOS Structures for Future ULSI Technology", delivered at CETYS University, Ensenada campus, Mexico on 1/6/ 2014.
31. A talk entitled "Research methodology and research career", delivered at Dr. Babasaheb Ambedkar Marathwada University, Aurangabad on 21st June 2014.
32. A talk entitled "Role of INUP CEN facility in improvement research activity", delivered at CEN, IIT Bombay during '1st Familiarization Workshop Phase II' on 26th May 2014.
33. A talk entitled "Leadership role of North Maharashtra University promoting innovation in engineering education", delivered at University of Tokushima, Japan during "International symposium on global engineering education" during 3rd-5th March 2013.
34. A talk entitled "Introduction to Nanoelectronics", delivered at University Department of Chemical Technology, North Maharashtra University, Jalgaon during AICTE sponsored Staff Development Program on 'Recent Advances in Polymer Technology' during June 15-30, 2011.
35. A talk entitled "Nanofabrication Techniques", delivered at University Department of Chemical Technology, North Maharashtra University, Jalgaon during Second Professional Certificate Course on Nanotechnology during 11th -15th May 2011.
36. A talk entitled "Introduction to Nanoelectronics", delivered at University Department of Chemical Technology, North Maharashtra University, Jalgaon during May 2010.
37. A talk entitled "Recommendation of national knowledge commission "at Dr. Annasaheb G.D. Bendale Mahila Mahavidyalay, Jalgaon during Jan. 2010.
38. A talk entitled "Nanofabrication and nanolithography", delivered at University Department of Chemical Technology, North Maharashtra University, Jalgaon during Dec. 2009.
39. A talk entitled "IC fabrication technology", delivered at Suresh dada Jain Engineering College, Jalgaon during Feb. 2008.
40. A talk entitled "Material Deposition Systems" delivered to the participants of refresher course conducted by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad during Oct. 2007.
41. An invited talk entitled "Dielectric films for Micro/Nano Electronics Applications" delivered in the 2nd National seminar on Materials preparation and characterization held at Dept. of Physics, RTM Nagpur University, Nagpur during 30th- 31st March 2007.
42. Delivered a popular lecture on "Career Opportunities in Electronics after B.Sc." at Dr. Annasaheb G.D. Bendale Mahila Mahavidyalaya, Jalgaon during Jan. 2007.
43. A talk entitled "IC fabrication Technology" delivered to the participants of refresher course conducted by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad during 2006.
44. A talk entitled "Growth and Characterization of Low-k dielectric films for microelectronics Applications" delivered at Liquid crystal research center at University of Calabria, Rende, Cosenza, Italy during Nov. 2006.
45. An invited talk entitled "design and fabrication of PECVD system for high growth rate deposition of SiO₂ films" delivered to the participants of DST sponsored National workshop OICS-2004 held at North Maharashtra University, Jalgaon during 29th-30 July 2004.

46. A talk entitled “VLSI fabrication technology” delivered to the graduate and master students at Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea on 28th April 2004.
47. A talk entitled “development of PECVD system for high growth rate deposition of SiO₂ films” delivered to the researchers of Photonics research center at Korea Institute of Science and Technology (KIST), Seoul, South Korea on 27th April 2004.
48. An invited guest lecture entitled “VLSI fabrication technology” delivered for the E& TC students of S B T Engineering College, Bambhori, Jalgaon March 2004.
49. An invited talk entitled “development of PECVD system for the deposition of SiO₂ films” during an international conference ICOT-2004 held at North Maharashtra University, Jalgaon during Jan. 2004”.
50. Talk delivered to the participants of refresher course in Physics conducted by North Maharashtra University, Jalgaon as a resource person during Nov. 2001.
51. Honorary talk delivered to the participants at Academic Staff College, Jawaharlal Technological University, and Hyderabad Sept. 2001.
52. Honorary Lecture delivered at the Academic staff College, Karnataka University, Dharwad to the participants of Refresher course Nov. 1993.

➤ **Awards and Honors:**

1. **Best Teacher Award** (2019-20) of KBC N M U Jalgaon, India received on **7th Oct-2022**.
2. **Best Research Article publication Award** (2020-21) of KBC N M U Jalgaon, India received on **7th Oct-2022**.
3. **” Visiting Professor”**: Delivered lectures on **“Advanced Digital Systems”** in school of Electronics and information Engineering, **NCUT, Beijing** during 21st Oct-2019 to 19th Nov 2019 and 7th Dec 2019 to 19th Dec-2019 (during winter vacation)
4. Contributed as an one of **3 expert panelists** for the Panel entitled ” Use of ICT in teaching” during international conference, ICBHE-2019 held on 5th Sept-2019 at WUST, Wroclaw, Poland.
5. Delivered lectures series **in the Department** of Microelectronics, **NCUT, Beijing, China as a ‘Visiting Professor’** during 25th May to 21st June 2019 on Microelectronics (professional English)
6. Awarded Foreign Expert Project entitled “OVERSEAS FAMOUS TEACHER AWARD” by Ministry of Education (ME) and State Administration of Foreign Experts Affairs (SAFEA) , China for two years (1st Oct-2018 to 30th Sept-2020) to provide expert visits for 60 days/year in College of Science, China Agricultural University(CAU), Beijing and Micro electronics Deptt, North China University of Technology (NCUT), Beijing, China
7. Delivered lectures series **in the Department** of Materials Science and Engineering, **NTUST, Taipei, Taiwan as a ‘Visiting Professor’** during 22nd May to 1st June 2018 based on own research contribution/expertise.
8. Invited as an expert member of the international advisory committee for 2nd International workshop on **“Materials for Advanced Interconnects and Packaging”** held at North China University of Technology (NCUT) during 15th Oct. – 17th Oct. 2017 Beijing, **China**.
9. Shortlisted in **top 5** for the post of **Vice-Chancellor, Yashwantrao Chavan Maharashtra Open University**, Nashik, India and had interactions with Hon’ble Chancellor Sir on 22nd Feb. 2017 at Rajbhavan Mumbai.

10. Shortlisted in **top 5** for the post of **Vice-Chancellor, North Maharashtra University**, Jalgaon, India and had interactions with Hon'ble Chancellor Sir on 20th Oct. 2016 at Rajbhavan Mumbai.
11. Worked as an **actg. Vice-Chancellor of North Maharashtra University**, Jalgaon, India for 10 days.
12. Shortlisted for the post of **Director, NAAC, Bangalore** and had interaction with the expert committee on 24th July 2015 at UGC, New Delhi.
13. Served as the "**Registrar**", **Chief Administrative Officer of North Maharashtra University**, Jalgaon (9th Jan. 2012 to 8th Jan 2017).
14. **Chaired a session** in west zone Vice-Chancellor's Meet held at Shivaji University, Kolhapur, India organized by AIU New Delhi during 26th -27th Nov. 2015.
15. **Best Research Award** (2012-13) of N M U Jalgaon, India.
16. **Research & Development Award** (2013-14) of N M U Jalgaon, India.
17. Worked as a Chairperson in Electronics Engineering session of EESP-2011 held at Maldives during 27th-29th May-2011.
18. **Invitation fellowship** was awarded by IEEE EDS Bangalore chapter to attend IPFA-2007 held at Bangalore during 11th -13th July-07.
19. Worked as a **Chairperson** in microelectronics session of **ICMNT-06** held at TiziOuzou, Algeria during 19th-23rd Nov-2006.
20. Received **travel grant** award from ICMNT06 (ICTP, Italy) to participate in CMNT06 held at TiziOuzou, Algeria during 19th-23rd Nov-2006.
21. A competitive student award (post doc) of **US\$1000** from AVS, USA to attend ICMCTF-04 for research paper submitted to international conference ICMCTF-04 held during 19th-23rd April-2004 at Sand Diego, CA, USA.

Significantly contributed while working on the following positions of the university (NMU):

- **Chairman**
 - ✓ Eklavya Training Centre, Nandurbar
 - ✓ Hostel Management Committee
 - ✓ Anticorruption Cell
 - ✓ Committee for University Officers, Non-Teaching staff's evaluation for their promotion.
 - ✓ Financial Committee for UGC NET Exam. 2013 (at NMU Jurisdiction).
- **Secretary:**
 - ✓ Senate (Jan-2012- Jan-2017)
 - ✓ Management Council (Jan-2012- Jan-2017)
 - ✓ Academic Council (Jan-2012- Jan-2017)
 - ✓ Building and Works committee (Jan-2012- Jan-2017)
 - ✓ Selection committee for teaching staff and administrative officers (Class I)(Jan-2012- Jan-2017)
 - ✓ University Standing Advisory Committee (the "Think Tank")(Jan-2012- Jan-2017)

Establishment of 'Think Tank' is the unique activity of NMU for advising timely to various issues/aspects in order to make NMU as a globally competitive university.

● **Member:**

- ✓ Board of National and International Linkages, KBCNMU, Jalgaon (12th Oct. 2018 to 31st Aug. 2022).
- ✓ Research and Recognition committee for Board of Studies in “**Electronics and Instrumentation**” under Science and Technology faculty, KBCNMU, Jalgaon (20 July-2018 to Aug-2022) under section 37(2) (a)(iv) of Maharashtra Public universities act-2016.

Board of Governance

- ✓ University Department of Chemical Technology, NMU, Jalgaon. (2014-2017)
 - ✓ Government College of Engineering, Jalgaon.(2015- Jan-2018)
- (Prof Mahajan has contributed significantly towards the timely development of the UICT, NMU and Govt.Engg.College, Jalgaon through the various meetings of BoG based on his experience).

Academic Council

- ✓ Government College of Engineering, Jalgaon.(2013- 2018)

Board of Management

- ✓ Community College, Nandurbar. (Jan-2014- Jan-2017)
 - ✓ Ordinance and Statutes assessment/checking committee headed by Director, Higher Education constituted by Govt. of Maharashtra (since 2012).
- (This is very important committee constituted by the Govt. of Maharashtra for properly shaping, justifying whether to approve or not the statutes/ordinance submitted by various state universities in Maharashtra to Rajbhavan).
- ✓ Library Committee(Jan-2012- Jan-2017)
 - ✓ Finance and Accounts Committee(Jan-2012- Jan-2017)
 - ✓ Purchase Committee(Jan-2012- Jan-2017)
 - ✓ publication Committee(Jan-2012- Jan-2017)
 - ✓ Internal Quality Assurance Cell (IQAC)(Jan-2012- Jan-2017)
 - ✓ Assessment and accreditation procedures
 - ✓ Student Welfare Advisory Committee
 - ✓ Central Training and Placement Cell Advisory Board
 - ✓ SC/ST Cell Advisory Committee
 - ✓ Student Grievances Committee
 - ✓ Kendriya Vidyalaya Management Committee, NMU, Jalgaon
 - ✓ National Service Scheme Advisory Committee
 - ✓ Budget Monitoring Committee
 - ✓ University Fund Utilization,
 - ✓ Monitoring and Evaluation Committee
 - ✓ Anticorruption Cell
 - ✓ Maharashtra District Innovation Council for Dhule and Jalgaon district.
 - ✓ Expert committee for the evaluation of performances of Research Students for the award of ‘Shri. Gyanchand H. Raisonni Doctoral Fellowship’
 - ✓ Selection Committee for the selection of Statutory Officer Controller of Examinations, Finance and Accounts Officer at Dr. BAMU, Aurangabad.

Additional responsibilities successfully undertaken (in past)

- **Coordinator: Rashtriya Uchchatar Shiksha Abhiyan (RUSA) at NMU, Jalgaon**
(During June 2014 to 8th Jan. 2017)
Played an active role to get sanction of the funds from the RUSA for NMU and its proper utilization timely.
- **Director: Tribal Academy at Nandurbar**(Jan. 2014 to 8th Jan. 2017)
Played an active role to get sanction of the 25 acres of land to NMU for establishing Tribal Academy at Nandurbar from Govt. of Maharashtra/Collectorate Nandurbar. Also, played role in establishing community college of NMU at Nandurbar by obtaining funds from UGC.
- **BCUD Director, NMU (Additional Charge) :**
21st Aug. 2012 to 03rd Sept. 2012, 23rd to 27th March 2015,
20th to 25th July 2015, 30th Nov. 2015 to 4th Dec. 2015
And 26th Feb. 2016 to 04th March 2016.
- **Vice-Chancellor, NMU (Additional Charge):**
1st to 4th November-2014 and 22nd to 30th May 2016

➤ **Administrative Profile:** [Administrative Experience gained]

Successfully completed the 5 years tenure of "**Registrar**", **Chief Administrative Officer of North Maharashtra University, Jalgaon** (during 9th Jan. 2012 to 8th Jan. 2017).

⇒ **Organization of Major Events:**

- **Special convocation ceremony** (March 2012) organized for conferment of Honorary D. Litt. Degree on **Esteemed Smt. Pratibha Devisingh Patil**, President of India by NMU, and Inaugural ceremony of convocation Auditorium and corner stone laying ceremony of ST Girls and Boys Hostels at the auspicious hands of Esteemed Smt. Pratibha Devisingh Patil former President of India on 24th March 2012.
- 20th convocation ceremony (26th May 2012) graced by **Hon'ble Prof. Sukhdev Thorat, Chairman, ICSSR, New Delhi** and former Chairman UGC, New Delhi.
- 21st convocation ceremony (9th April 2013) graced by **Hon'ble Vice President of India Esteemed Shri. M. Hamid Ansari. Hon'ble Governor of Maharashtra State Esteemed Shri. K. Sankaranarayanan** and conferred honorary D. Litt. Degree on eminent scientist, Father of Green Revolution in India Hon'ble **Prof. M. S. Swaminathan** in convocation ceremony and Corner stone laying ceremony of the extension of School of Life Sciences building at the auspicious hands of Hon'ble Prof. M. S. Swaminathan.
- 22nd convocation ceremony (21st May 2014) was graced by renowned scientist **Hon'ble Ex. President of India Esteemed Dr. A P J Abdul Kalam as a chief guest and Hon'ble Dr. Anil Kakodkar**, Chairman Rajiv Gandhi Sci. Technology Commission, Mumbai & former Chairman of Atomic Energy Commission of India (AEIC) New Delhi, graced as guest of honor. The Corner Stone laying ceremony of Vidyarthi Bhavan at the auspicious hands of **Esteemed Dr. A P J Abdul Kalam**.
- Cornerstone laying ceremony of the Karmachari Bhavan & inauguration of Digital Knowledge Centre & Raupya Mahotsava Vatika was held at the auspicious hands of **Esteemed Shri. K. Sankarnarayanan**, Hon'ble Governor of Maharashtra on 7th August, 2014.
- 23rd convocation ceremony (16th March 2015) was graced by **Hon'ble Prof. V. K. Jain, Vice-Chancellor of Doon University, Dehradun**.

- 24th convocation ceremony (6th June 2016) was graced by **Hon'ble Prof. Ramesh Chand, Member, NITI Aayog**, Govt. of India, New Delhi.

⇒ **Interaction/discussion with eminent personalities:**

- ✓ Prof. Mahajan had opportunity to have one to one interaction regarding university with several eminent personalities/Scientists of the country and abroad. Includes, **Hon'ble Shri. Kailash Satyarthi** (Nobel Laureate), **Hon'ble Late Dr. A P J Abdul Kalam** (former President of India), **Bharat Ratna Esteemed Prof. CNR Rao**, **Hon'ble Dr. Anil Kakodkar** (Chairman, RGSTC, Maharashtra State), **Prof. J. V. Narlikar**, Renowned Indian Astrophysicist, **Prof. M. S. Swaminathan**, Father of Green Revolution in India, **Hon'ble Prof. Ramesh Chand** (Member of NITI Aayog, New Delhi), some of the Hon'ble Ministers of State and Central Government, Members of Parliament, Members of Legislative Assembly (Maharashtra State), etc. on behalf of NMU during last **five years**.
- ✓ Prof. Mahajan had an opportunity to participate in the several important state level meetings of VCs, statutory officers with Hon'ble Minister for Higher and Technical Education, Hon'ble Chief Secretary, Govt. of Maharashtra State, Principal Secretary of Higher and Technical Education and also with secretary to Hon'ble Chancellor at Mumbai during last **five years**.
- ✓ Prof. Mahajan had meetings/presentations/discussions with RUSA team, RUSA Directorate and national level expert committee at national and state level regarding R&D projects.

⇒ He had fruitful meetings and discussions/presentations with the authorities/ experts from **MHRD, UGC, DST, CSIR, INSA, DRDO, BRNS, AICTE, etc.** regarding funding support to NMU.

⇒ **Presented the following proposals to the different Govt. funding agencies on behalf of NMU and got sanction of :**

1. 8 line Swimming Pool at NMU (UGC, New Delhi) grant of **Rs. 2.25 Crores**.
2. Woman's Hostel for 75 Girls (UGC, New Delhi) grant of **Rs. 1.25 Crores**.
3. Community College at Nandurbar (UGC, New Delhi) grant of **Rs. 70.00 Lacs**.
4. Tribal Academy at Nandurbar (Along with Hon'ble Vice Chancellor Sir) from Govt. of Maha., obtained the **25 Acre Land** with rigorous follow up at various levels.
5. Rashtriya Uchchatar Shiksha Abhiyan (RUSA) (MHRD, New Delhi) at various levels and got **Rs. 20.00 Crores** sanctioned as RUSA coordinator.
6. Biodiversity Park at NMU (under process) Govt. of Maharashtra with rigorous follow up at various levels for **Rs. 8.4 Crores**.

⇒ **To promote the research environment among the students, researchers, faculty and non-teaching staff of the university research and performance based motivational awards were instituted and distributed since year 2012.**

Defined the criteria for the awards and executed effectively by taking leading role along with other NMU stake holders.

- **Instituted in consultation with Hon'ble Vice-Chancellor Research Award for University Teachers (as a Patent, best Publication and best funding award).**
- **Instituted in consultation with Hon'ble Vice-Chancellor Research Award for College Teachers (Patent).**
- **Following awards are being given on University foundation day every year under the guidance of VC Sir :**

Best Faculty Award (University Campus), Best Faculty Award (College Level), Best Administrative Officer Award (Class 1 & Class 2), Best Non-Teaching Staff Award (Class 3 & Class 4), Best College Award (Colleges), Best Library User Award (University Campus), Best Daily Wages Staff Award (University Campus)

⇒ **New Buildings/ Schools/Departments have been built through the construction department of NMU under the guidance of Hon'ble Vice Chancellor:**

1. VVIP Guest House, UGC XII Plan, 6500 sq. ft.
2. Dr. A P J Abdul Kalam Vidyarthi Bhavan (67000 sq. ft.)

Having facilities such as:

Student facility center, E-Suvidha, NSS, NCC, Students welfare, Seminar Hall, Auditorium Hall with capacity 300 peoples, Girl's hostel, foreign student's hostel.

3. School of Mathematical Sciences Building Phase II.
4. School of Life Science Building Phase II.
5. Karmachari bhavan having recreation hall for employees, Karmachari society and Unions office.
6. Uttam Vidya Nagari Karmchhari Vasahat for **class III & IV** employees having 1354 sq.ft. spacious blocks.
7. Babu Jagajivanram SC girls hostel for **200 girls** funded by Ministry of Social Justice and Empowerment, Government of India.
8. Minority Girls Hostel for **100 girls**, funded by Ministry of Minority Affairs, Government of Maharashtra.

Crucial role played for internationalization of NMU:

Prof. Mahajan as a liaising officer, have signed and made operational as many as 25 MoUs with international and national universities/institutions/industries of high repute under the guidance of Hon'ble Vice Chancellor for the national and international exchange of students, faculties etc. Out of which 3 MoUs were personally initiated by Prof. Mahajan as follows:

- University of California, Riverside, USA. MoU Signed on 5th June 2014
- Tokushima University, Tokushima, Japan. MoU Signed on 4th May 2014.
- Wroclaw University of Technology, Wroclaw, Poland. MoU Signed on 6th May 2016.

In view of the process of internationalization of NMU endeavor for the promotion of academic and research collaboration, Prof. Mahajan had discussion with eminent scientists, professionals from foreign academic institutions and research laboratories. Some of them include, **Prof. Murakami (Director, CICEE, Tokushima University, Japan), Marco Funiculi (IMM-CNR, Agrate Brianza, Milan, Italy) Prof. Carlos Gonzalez, Prof. Scott Venezia Corral (CETYS University, Mexico), Dr. Thomas Schroeder (IHP, Germany), Prof. Toshohiro Moriga (Tokushima University), Prof. Lukasz Wojdyga (Director, CIC, Warsaw University of Technology, Poland), Prof. Andy Kummel (University of California, San Diego, USA) Prof. Ashok Mulchandani (University of California, Riverside, USA) etc.**

➤ **Social Responsibility:**

- Actively involved **as a Registrar** in the adoption of undeveloped five villages in the periphery of NMU specially tribal and rural areas since its inception.
- Crucial role played in effective implementation of **SMART VILLAGE** project of NMU under the guidance of Hon'ble Vice Chancellor.
- Organized village level meeting with farmers, villagers regarding awareness about **TB Free India Mission** among the farmers residing in the smart villages along with health center staff.
- To build inclusive social capital among students, a summit entitled '**Samata Students Enlightenment Summit**' organized during 6th - 7th Feb. 2016 at North Maharashtra University, Jalgaon (MS) as a key core team member.
- Successfully implemented University schemes like, **Karmveer Bhaurao Patil 'Earn and Learn Scheme'**, '**Eklavya Vidyadhan Scheme**', '**Babasaheb Ambedkar Hostel Scholarship**' to help the economically backward students through student welfare department.
- Encouraged and actively participated in various '**Tree Plantation**' program of NMU, **Clean India and Digital India mission of Govt. of India**.
- Frequently attended a special awareness workshops organized by Hon'ble Vice Chancellor for farmers in rural area under **Lab to Land** program of NMU.
- Actively participated in view of strengthening the dialogue and relations between the industrialists, under **Lab to Industry** scheme of NMU.
- Took special emphasis on regular organization of '**Blood Donation Camp**' in NMU region.

Place: Jalgaon

Date: 14th Feb-2023

(Prof. A. M. Mahajan)