### **Dr. Tameshwer Nath**

M.Tech (SLIET, Sangrur), Ph.D. (IIT Indore)
Assistant Professor, Mechatronics Engineering,
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### **Educational Qualification:**

S.No	Qualification	Institution	Year of	Division
			Passing	
1.	Ph.D. (Mechanical	Indian Institute of		
	Engineering)	Technology, Indore	February 2019	
		www.iiti.ac.in		
	Master of Technology	SLIET, Deemed university,		
2.	(Manufacturing systems	Central Government,	July 2012	First Div.
	Engineering)	Sangrur, Punjab,		
		www.sliet.ac.in		
3.	Bachelor of Technology	Institute of Technology and		
	(Mechanical	Management, Gorakhpur	July 2008	First Div.
	Engineering)	www.itmgida.edu.in		
4.	Diploma in Mechanical	MaharanaPratap		
	Engineering (Computer	Polytechnic Gorakhpur	August 2005	First Div.
	Aided Design)	www.mppolytechnic.net		
5.	Intermediate	F.C.I.Inter college,	August 2001	First Div.
		Gorakhpur		
6.	High school	F.C.I.Inter college,	August 1999	First Div.
	_	Gorakhpur	_	

- Research Interest: Design and control of Mechanical Systems, smart material (Shape Memory Alloy specially NiTi), Design for Manufacturing & Assembly, Mechatronics, Machine Design
- Technical Skills: SEM, TGA, XRD, EDAX etc.
- Analysis And Control Software: Symbol's 'shakti(Bond Graph), Ansys, Comsol, Matlab (Simulink), Auto-CAD, Origin-Pro

### **➤** Work Experience :

S.No	Position	Department and Institute	Period
1.	Assistant	Department of Mechatronics	September 2020- Till
	Professor	Engineering, Indian Institute of	Now
		Information Technology	
		Bhagalpur, Bihar	
2.	Assistant	Department of Mechanical	April 2019 to July 2019
	Professor	Engineering, Swami	
		Vivekanand Subharti	
		University, Meerut, UP	
3.	Research	Funded by CSIR, working in	May 2018 to Dec. 2018
	Associate	IIT Indore	-
4.	Teaching	Department of Mechanical	Jan. 2014 to April 2018
	Associate	Engineering, IIT Indore, MP	
	_	Department of Mechanical	

5.	Assistant	Engineering, Swami	Aug. 2012 to Dec. 2013
	Professor	Vivekanand Subharti	
		University, Meerut, UP	
		Department of Mechanical	
6.	Lecturer	Engineering, Swami	Aug.2008 to Aug.2010
		Vivekanand Subharti	
		University, Meerut, UP	

# > Research and Development :

S.No	Degree	Stream	Dissertation Title	Supervisor
			Investigations on Contact and	Dr. I.A.Palani (Professor and
	Doctor of	Mechanical	Non-Contact Based Actuation	Dean R & D),
1.	Philosophy	Engineering	Studies of Shape Memory Alloy	Indian Institute of Technology
			(SMA) Structures and their Life	Indore
			Cycle Behavior	
		Manufacturing	Dynamic behavior and control of	Dr. Vikas Rastogi (Professor),
	Master of	systems	Quarter/Half/FullCar Models	Delhi Technological
2.	Technology	Engineering	with Active And Passive	University, Delhi
			Suspension system	
3.	Bachelor of	Mechanical	Design of Powered Jack	Dr. Virendra Mishra (Associate
	Technology	Engineering		Professor), Galgotia
				Engineering College, Noida
4.	Polytechnic	Mechanical	Design and Fabrication of	
		Engineering-	Winnowing Fan"	Mr. Rajendra Tiwari (Lecturer)
		Computer		
		Aided Design		

# > Administrative Responsibilities:

S.No	Position	Department and Institute	Period
1.	F/I Security	IIIT Bhagalpur	July 2022 – Till Now
2.	F/I Transport	IIIT Bhagalpur	July 2022 – Till Now
3.	Training and	SITE, Subharti University, Meerut	Apr. 2019 –Jul. 2019
	Placement officer		
4.	Head of	Department of Mechanical	Aug.2012 – Dec. 2013
	Department	Engineering, Swami Vivekanand	
		Subharti University, Meerut, UP	
5.	PG-Programme	Department of Mechanical	Sept.2012-Dec. 2013
	Coordinator	Engineering, Swami Vivekanand	
		Subharti University, Meerut, UP	
6.		Subharti polytechnic college, Swami	Dec. 2012 to Dec.2013
	Head of	Vivekanand Subharti University,	
	Academics	Meerut, UP	
7.		Department of Mechanical	Oct.2009 to Aug.2010
	UG Programme	Engineering, Swami Vivekanand	
	Coordinator	Subharti University, Meerut, UP	

# > Training:

S.No	Position	Unit	Period
1.	Training	Central Workshop, Indian	Jun. 2006-Jul.
		Railway, Gorakhpur	2006
2.	Training	CFEES, Defence Research and	Jun.2007-Jul.2007
		Development Organisation, Delhi	

# > Project Completed: (1): As a PI

S.No.	Title	<b>Funding Agency</b>	Principal	Designation	Duration
		(Fund)	Investigator		
1.	Investigation on the thermo- mechanical behavior of Ni-Ti shape memory alloy under different control strategies for MEMS devices	Council of Scientific and Industrial Research (CSIR) Project Cost: (Rs.5,14,333.00)	Dr. Tameshwer Nath (Indian Institute of Technology Indore)	Research Associate	01 Year (May 2018- Mar 2019)

# ➤ Project: On Going (1): As a CO-PI

S.No.	Title	Funding Agency	Principal	Co-Investigator	Duration
		(Fund)	Investigator		
1.	Design and	Defence Research and	Dr. Shiva S. (Indian	Dr. Tameshwer	02 Years (April
	Development of	Development	Institute of	Nath (IIIT	2021-April 2023)
	fire resistance	Organization (DRDO),	Technology Jammu)	Bhagalpur)	_
	Hollow Tubes for	Project Cost: Rs.			
	gun barrel	46,63000			
	applications using				
	wire arc additive				
	manufacturing.				

# **▶** PhD Thesis Supervision (02):

S.No	Student Name	Thesis Title	Status	Co-Guide (If	Affiliation
				any)	
1.	Mr. Lawakush	Course work is going on	On-Going	No	
	Mishra				IIIT Bhagalpur
	(2103014)				
2.	Mr. Shankar	Course work is going on	On-Going	No	
	Kumar				
	(2103015)				

# ➤ M. Tech Project Guide (02+02):

S.No	Student Name	Thesis Title	Status	Co-Guide (If	Affiliation
				any)	
1.	Praveen Kumar Pandey (2102017)  Detailed Investigations on different modes of charging techniques for EV		On-Going	Dr. Abhinav Gautam	IIIT Bhagalpur
2.	Md. Yusuf (2102014)	Implementation of control strategy for performance enhancement of Battery charger in EV	On-Going	No	
3.	Abhishek Shukla (1001240001)	Optimization of Surface Roughness of A 713 Aluminium Alloy in Turning operation using Taguchi Method	Completed (2012-2013)	No	SVSU Meerut
	Mayank Tripathi	Optimization of Surface Roughness	Completed		

4.	(1001240006)	of A 535Aluminium Alloy in	(2012-2013)	No	
		Turning operation using Taguchi			
		Method			

### > B.Tech Project Guide (06):

S.No	Roll No	Student Name	Project Title	Status	Co-Guide (If any)	Affiliation
1.	180103011	Mr. Gopesh Krishna Yadav	Design and Development of shape memory alloy based	Completed (2021-22)	No No	
	180103013	Mr. Russell R.	Bladeless Intelligent Autonomous Drone for fruit picking application	Completed (2021-22)	No	IIIT Bhagalpur
2.	180103010	Mr. Deepak raja Kannepalli	Design and Development of Arduino Based Obstacle Avoidance Robot car	Completed (2021-22)		
3.	0520940018 0520940023 0520940048 0520940055	Mohd. Adil Navneet Tyagi Saurav Khandelwal Vasisth Kumar	Analysis of Technique Using Briquetting Plant	Completed (2008-2009)	Mr. Lawakush Mishra	
4.	0520940028 0620940003 0620940014 0620940039	Pankaj Kumar Amit Kumar Upadhyay Guru sewak Kesarwani Sarish Barnwal	Study of steer by wire system	Completed (2009-2010)	No	SVSU Meerut
5.	0901140004 0901140011 0901140020 0901140037	Aditya Raj Arun Kumar Singh Gautam Kumar Rajeev Ranjan	Maglev Train	Completed (2012-2013)	Mr. D.P.Singh	
6.	0901140002 0901140008 0901140018 0901140026	Abhishek Tiwari Amrit Gogoi Gaurav Mohd. Shamshad Alam	Automatic Wiper starts when Rain Starts	Completed (2012-2013)	Mr. Sanjeev Kumar	

### **Publication:**

### • Patent (IPR): 01

• I.A.Palani, B.K. Lad, **Tameshwer Nath** and Pradeep Kundu, (2016), ""Thermo-mechanical test bench for reliability estimation of Shape memory alloy spring," India, *Application No: 201621007005*, **Published online:10-11-2017** 

### • International Journals (SCI Indexes): 11

- Prashant Kumar, Tameshwer Nath, 2022"An Experimental Investigation into Effect of Reinforcement Material on Mechanical Properties of Linear Low-Density Polyethylene" *Defence Science Journal*, 72 (3), <a href="http://doi.org/10.14429/dsj.72.17703">http://doi.org/10.14429/dsj.72.17703</a>, IF: 0.85
- Bunty Tomar, S.Shiva, Tameshwer Nath, 2022, "A Review on wire arc additive manufacturing: Processing, parameter, quality improvement and recent advances" *Materials Today Communications (Elsevier)*, 31, pp-1-24, http://doi.org/10.1016/j.mtcomm.2022.103739, IF: 3.383
- 3. Vineet Kumar Singh, **Tameshwer Nath**, 2022, "Energy Generation by small hydro power plant under different operating conditions" *Int. J. of Hydro-mechatronics (Inderscience)*, *Vol. 4 (4)*, *pp: 331-349 http://doi.org/10.1504/IJHM.2021.10043474*
- 4. **Tameshwer Nath**, Sunil Kumar, 2021, "Nitinol shape memory alloy spring: a review" Indian Journal of Engineering & Material Sciences, *IJEMS Vol.28(5)*, pp. 446-453, IF: 0.881
- Pratik Btatnagar, Sumit Aggrawal, Tameshwer Nath, Surendra P. Singh, 2020"Investigation on mechanical Properties of selected restorative dental materials upon fiber reinforcement "International Journal of Dental science & Innovative Research (IJDSIR), 3(5), 190-201
- Mani Prabu S.S., Mithun R., Muralidharan M., Tameshwer Nath, Brolin A, Akash K., Palani I.A. 2019, "Thermomechanical Behavior of shape memory alloy spring actuated using novel scanning technique powered by ytterium doped continuous fiber laser" Smart Material and Structures (IOP Science), 28 (4), 047001, <a href="http://doi.org/10.1088/1361-665X/ab068">http://doi.org/10.1088/1361-665X/ab068</a>, pp-1-13, IF: 2.9
- Tameshwer Nath, Akash K., Priya Chouhan, Bhupesh Kumar Lad, I.A.Palani, 2018, "Investigation on thermomechanical behaviour of SMA spring under the influence of different actuation medium" *Micro-system Technologies (Springer)*, <a href="http://doi.org/10.1007/s00542-017-3695-z">http://doi.org/10.1007/s00542-017-3695-z</a>, pp: 1-9 IF: 1.439
- Reena Disawal, Tameshwer Nath, Shashi Prakash, I.A. Palani, 2018 "Life cycle analysis of Electrically actuated SMA spring using Talbot Interferometry" Applied Optics (OSA), Vol: 57 (20), http://doi.org/10.1364/AO.57.005779, pp: 5779-5783
- Pradeep Kundu, Tameshwer Nath, I.A.Palani, B.K. Lad, 2018 "Integrating GLL-Weibull distribution within a
  Bayesian framework for life prediction of Shape memory alloy spring undergoing Thermo-mechanical fatigue"

  Journal of Materials Engineering and Performance, (Springer), <a href="http://doi.org/10.1007/s11665-018-3435-2">http://doi.org/10.1007/s11665-018-3435-2</a>, pp28-35, IF: 1.652
- Tameshwer Nath, Priya Chouhan, Reena Disawal, I.A. Palani, 2017 "Comparative study of electrically and hot water actuated shape memory alloy using developed thermo-mechanical cycle test bench", *Defence Science Journal*, 67 (1), ,pp:100-107, <a href="http://doi.org/10.14429/DSJ.67.10489">http://doi.org/10.14429/DSJ.67.10489</a>, JF: 0.50
- 11. Akash Kumar, Mani Prabu, Ashish Shukla, **Tameshwer Nath**, Karthick S, I.A.Palani, 2017"Investigations on the Life cycle Behavior of Cu-Al-Ni/Polyimide Shape Memory Alloy Bi-morph at Varying Substrate Thickness and Actuation conditions", *sensors and actuators A: Physical (Elsevier)*, 254, <a href="http://doi/org/10.1016/j.sna.2016.12.008">http://doi/org/10.1016/j.sna.2016.12.008</a>, <a href="http://doi/org/10.1016/j.sna.2016.12.008">pp:28-35</a>, <a href="http://doi/org/10.1016/j.sna.2016.12.008">IF: 2.201</a>

### • International Journal (SCOPUS Indexes): 01

**1. Tameshwer Nath**, Abhilash Kasliwal, Raghunandan singh, Kartik Kulkarni, Gaurav Raut, Alok Kumar, Ritesh Khatri, Sahil Mittal, I.A. Palani, 2015 "Investigation on the Laser Based Actuation of Single way Trained SMA sheet and Their Application for the Development of Micro Positioning Stage" *Applied Mechanics and Materials*, 766-767, pp 427-431, http://doi.org/10.4028/www.scientific.net/AMM.766-767.427

### • Book Chapter: 02

- 1. Tameshwer Nath, Karthick S., Priya chouhan, Bhupesh K. Lad, I.A.Palani, 2016 "Investigation on Actuation and thermo-Mechanical Behavior of Shape Memory Alloy Spring by comparing On/off and PID Controller for Precise Position Control" CCIS 627, pp. 1–11, http://doi.org/10.1007/978-981-10-2845-8\_8
- 2. Priya Chouhan, Tameshwer Nath, Bhupesh K Lad, I.A.Palani, 2016 "Investigation on actuation and thermomechanical behavior of Shape Memory Alloy spring using hot water" *IOP Conference series under material science and engineering*, <a href="http://.org/10.1088/1757-899X/149/1/012147">http://.org/10.1088/1757-899X/149/1/012147</a>

### • International Conferences: 13

- 1. Suraj, Arun Kumar, **Tameshwer Nath**, Bikas Prasad, "Sustainable Design Innovation & Samp; Analysis of Customized Solar Frame Bicycle." *International Conference on Progressive Research in Industrial & Mechanical Engineering [PRIME-2021]*, held during 5th-7th August 2021, at National Institute of Technology Patna, India
- 2. Mithun R, Tameshwer Nath, Mani Prabu S S, Palani I A, "Influence of Flow Domain Parameters on hot Water Actuation Of Shape Memory Alloy Spring For Barrier Gate System", 7th International and 28th All India Manufacturing technology, Design and Research (AIMTDR-2018)",held during 13th to 15th December 2018 at college of Engineering, Guindy Anna University, India
- 3. Yogeshwaran S.M., **Tameshwer Nath**, Reena Disawal, I.A. Palani, "Design and fabrication of shape memory alloy actuated Stewart platform for automated laser assist micro machining application" *10th International conference on precision, Meso, Micro and Nano Engineering (COPEN-10), held during 06-09 December 2017 at Indian Institute of Technology Madras, India, ISBN No: 978-93-80689-28-9, PP No: 962-965*
- 4. Tameshwer Nath, Gaurav Raut, Alok Kumar, Ritesh Khatri, I.A.Palani," Investigation on Laser assisted actuation of shape memory alloy based Micro-Valve" *International conference on Robotics*, Automation, Control and Embedded systems (RACE 2015), held during 18<sup>th</sup> -20th February 2015, at Hindustan university chennai, India.
- 5. Himanshu singh, Prateek Juiker, Tameshwer Nath, I.A. Palani, B.K. Lad, "Failure Diagnosis & Reliability Assessment of NiTi Shape Memory Alloy Spring for Micro- Actuators" International conference on Robotics, Automation, Control and Embedded systems (RACE 2015), held during 18th -20th February 2015, at Hindustan university chennai, India.
- 6. Tameshwer Nath, Akash K., Shiva S., Farhan Babu, I.A. Palani, 'Investigations on The Effect of Laser Actuation And Interaction on Ni-Ti SMA Sheet For The Development of Micro-Grippers' *International Union of*

- Material Research Societies- The IUMRS International Conference in Asia-2014, held during August 24<sup>th</sup> -30<sup>th</sup>, 2014 at Fukoka Japan.
- 7. Akhil Verma, Anand K, Hari Visanth, **Tameshwer Nath**, I.A. Palani, "Investigation on hot fluid based actuation of SMA spring and their application for the development for Heat Engine" *International conference on Mechanical and material science engineering: Innovation and Research (ICMMSEIR:2018) held during 5-6<sup>th</sup> July 2018 at Sandip foundation: Sandip Institute of Technology and Research Centre, Nasik, India*
- 8. Priya Chouhan, **Tameshwer Nath**, I.A.Palani, Bhupesh K. Lad, "Development of test rig for Laser actuated Shape Memory Alloy (SMA) spring and its life cycle analysis", 6th International and 27th All India Manufacturing technology, Design and Research (AIMTDR-2016)",held during 16th to 18th December 2016 at college of Engineering, Pune, India
- 9. Karthick S, **Tameshwer Nath**, Akash K., I.A. Palani, "Cyber Physical System Design for Shape Memory Alloy Sentroller based Intelligent Instrument" *International Conference on Advancements in Automation, Robotics and Sensing (ICAARS 2016)*, held during 23<sup>rd</sup> to 24<sup>th</sup> June 2016 at PSG Tech college of Technology, Coimbatore, India
- 10. **Tameshwer Nath**, Ravi Kumar Thakur, Vikas Rastogi, "Modeling and simulation of vehicle with controller" *International Conference on Contribution of Science and Technology in Progress of the World held during December 5<sup>th</sup> -7<sup>th</sup> 2013 at Metcalf House, DRDO House, New Delhi*
- 11. **Tameshwer Nath**, Vikas Rastogi, "Dynamic Modeling and Simulation of Automotive Suspension System with Overwhelming Controller" *International conference* on smart Technologies for Mechanical Engineering held during October 25<sup>th</sup> 26<sup>th</sup> 2013 at Delhi Technological University, Delhi.
- **12. Tameshwer Nath,** Vikas Rastogi, "Dynamic Behavior and control of Quarter/Half/Full car model with Active suspension (PID controller)," International conference on Recent Trends in Engineering &Technology" held during November 28<sup>th</sup> 29<sup>th</sup> 2012 at SITE (swami vivekanand subharti University, Meerut, U.P). *ISBN:* 978-81-925922-0-6
- 13. Tameshwer Nath, Ruchi chaudhary, Ajit Katiyar, "future of supply chain management in various food production" International conference on Role of Technology in Nation Building" held during April 26, & 28<sup>th</sup>, 2013, at SITE (swami vivekanand subharti University, Meerut, U.P). ISBN: 97881925922-1-3

### National Conferences: 02

- 1. Tameshwer Nath, Vikas Rastogi, Dynamic Modeling and control of Automotive suspension system using Bond Graph., "National conference on Recent Trends in Mathematics", held during December 16<sup>th</sup> & 17<sup>th</sup>, 2011, at Sant Longowal Institute of Engineering & Technology, Sangrur, Punjab.
- 2. Vikas Rastogi, **Tameshwer Nath**, Quarter/Half/Full car models for passive suspension (With PID controller "National conference on Recent advances in Mechanical Engineering", held during June 08th & 09th, 2012, at Hindustan College of Science & Technology Mathura, U.P.

### Achievements and Awards

- 1. F/I Security and F/I Transport of IIIT Bhagalpur from 19/07/2022 to Till Now.
- 2. Delivered an Expert Talk on Investigations on actuation studies on shape memory alloy based MEMS devices and its review on 30<sup>th</sup> April 2022 at Bhagalpur college of Engineering Bhagalpur.
- Organized Short Term course on "Mechatronics, Instrumentations, Intelligent & Bio-Inspired Materials" at IIIT Bhagalpur from 10<sup>th</sup> -14<sup>th</sup> February 2021.
- 4. Delivered an Expert Talk on Recent Innovation in MEMS field: Mechatronics Approach on 04<sup>th</sup> February 2021 at Amity School of Engineering and Technology, Noida.
- Delivered an Expert Talk on Mechanical System Design and Modelling in BCE Engineering College on 27<sup>th</sup>
  January 2021
- Session Chaired in 11th International Conference on Materials Processing and Characterization -2020 (ICMPC 2020) organized by Department of Mechanical Engineering, Indian Institute of Technology Indore during 15-17 Dec 2020.
- Organized a webinar on "Compact Modeling, Parameter Extraction and Verilog-A Implementation of RF MOS Devices: for 5G Applications" at IIIT Bhagalpur on 27<sup>th</sup> October 2020.
- 8. Training and Placement officer of SITE, Subharti University from 16<sup>th</sup> February 2019 to July 2019.
- 9. SPIE Membership from 2018 to Till Now (SPIE-3623207)
- 10. Reviewer of: Material Research Express (IOP Science), Microsystems Technologies (Springer), Current Mechanics and Advanced Materials and Journal of Intelligent Material systems and Manufacturing.
- 11. Appreciation letter given by Discipline of Mechanical Engineering, IIT Indore on July 8<sup>th</sup> -14<sup>rd</sup> 2018 for Successful completion (Member of student organizing Team) of GIAN *Course* on Laser Assisted Surface Microand Nano-fabrication
- 12. Reviewer of International conference on Mechanical and material science engineering: Innovation and Research (ICMMSEIR:2018) organized by Sandip Foundation Nasik.
- 13. Appointed as an "Associate Bentham Science Ambassador" of Bentham science Journal from July 2019 onwards.
- 14. Best Outstanding research award in 2018 by Sandip Foundation Nasik on 5<sup>th</sup> July 2018.
- 15. Awarded for Research Associate ship (RA) from CSIR-HRDG (May 2018- March 2019)
- 16. Participated in TEQIP sponsored Short term training programme on Recent Trends in Mechatronics and Robotics-2018 on December 10<sup>th</sup>-14<sup>th</sup>, 2018.
- 17. Participated in 5<sup>th</sup> Industry Academia conclave at Indian Institute of Technology Indore on 6<sup>th</sup> September 2017.
- 18. Appreciation letter given by Discipline of Mechanical Engineering, IIT Indore on December 7<sup>th</sup> -21<sup>st</sup> 2016 for Successful completion (Member of student organizing Team) of ISHAN VIKAS PROGRAM.
- 19. Attended course on Lab-view for core-1 and core-2 sponsored by NI systems India on February 15th-16th 2016.
- 20. Appreciation letter given by Discipline of Mechanical Engineering, IIT Indore on July 19<sup>th</sup> -23<sup>rd</sup> 2016 for Successful completion (Member of student organizing Team) of short term course on Mechatronics, MEMS & Micro fabrication.

- 21. Appreciation letter given by Discipline of Mechanical Engineering, IIT Indore on December 2<sup>nd</sup> -15<sup>th</sup> 2015 for Successful completion (Member of student organizing Team) of ISHAN VIKAS PROGRAM.
- 22. Appreciation letter given by Discipline of Mechanical Engineering, IIT Indore on July 7<sup>th</sup> -11<sup>th</sup>, 2014 for Successful completion (Member of student organizing Team) of short term course on Mechatronics, MEMS & Micro fabrication.
- 23. Awarded Half time Teaching and Research Assistantship (HTRA) from IIT Indore (January 2014-April 2018)
- 24. Appreciation letter given by SITE, Subharti University, Meerut for F/I of Technical Committee of VERVE-2013 (Tech fest) on November 28-30th 2013.
- 25. Awarded Best Teacher (2012-13) from SITE, Subharti University (Subharti Institute of Technology & Engineering), Meerut, U.P.
- 26. All India Test Qualified in 2010 as 3rd Ranker in SLIET Entrance Test.
- 27. Achieved "B" Certificate with grade of "C" from NCC at Gorakhpur on 10 September 2003.
- 28. Achieved certificate of Participation from PCRA (Petroleum conservation Research Association), held in Maharana Pratap Polytechnic Gorakhpur, U.P. on 27-03-2003

### **Contact Information:**

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