Curriculum Vitae

Pradeep L. Menezes, Ph.D.

Assistant Professor, Department of Mechanical Engineering,
University of Nevada, Reno (UNR)
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Summary of Research Publications *(h-Index = 33, Citations > 4000)*

Patent – 1; Book – 4; Chapters - 28; Journal articles – 105; Conference articles - 84

Research Experience

07/2015-present	Assistant Professor, Department of Mechanical Engineering, University of Nevada, Reno, USA
09/2008-06/2015	Post-Doctoral Research Associate, University of Wisconsin-Milwaukee, Milwaukee, USA
05/2008-08/2008	Post-Doctoral Research Associate, University of Pittsburgh, Pittsburgh, USA
08/2007-04/2008	Research Associate, Indian Institute of Science, India
08/2003-07/2007	Graduate Researcher, Indian Institute of Science, India
08/1999-07/2003	Project Associate, Indian Institute of Science, India
08/1997-08/1999	Post-graduate Research Fellow, National Institute of Technology, Surathkal, India

Teaching Experience

10/2013-10/2016	Adjunct Assistant Professor, Department of Industrial and Manufacturing Engineering at UWM
01/2012-05/2015	Adjunct Instructor, Department of Materials Engineering at UWM
06/2007-12/2007	Visiting Faculty, Department of Physics, Jain University, Bangalore, India

Education

03/2008	**Doctor of Philosophy**, Materials Engineering, Indian Institute of Science (IISc), Bangalore, India
09/1999	**Master of Technology**, Materials Engineering, National Institute of Technology (NIT), Surathkal, India
05/1997	**Master of Science,** Materials Science, Mangalore University, Mangalore, India
05/1995	**Bachelor of Science,** Science, Mangalore University, Mangalore, India

Summary of Professional Services

Served as Editorial board member, Journal reviewer for over 50 journals, Conference paper reviewer, Book and book chapters reviewer, Conference review committee, Conference technical committee, Thesis reviewer, Grant reviewer, Masters and Ph.D. comprehensive examination committee, Poster competition judge, Session chair in conferences, Convener of tribology division at UWM, Undergraduate and graduate project supervision.

Research Projects

- Design of durable surfaces through laser shock peening and texturing process
- Design and development of bio-based novel ionic liquid lubricants for energy conservation and sustainability
- Synthesis and tribological characterization of graphene based self-lubricating composites
- Design and development of sustainable materials for additive manufacturing
- Experimental and numerical investigations of shoe and floor design to reduce slip and fall accidents

- Development of multi-physics explicit finite element models to study the tribological interactions during rock drilling with fluid interface
- Mechanical and tribological properties of micro/nano metal matrix composites
- Design and development of multi-functional hybrid bio based lubricants for manufacturing processes
- Development of numerical models for chip separation during metal cutting operations
- Design and characterization of surface textures for metal forming operations
- Experimental and numerical analysis of strain rates and microstructural evaluation during metal forming
- Design and development of coatings using additives for the automotive industry.

Awards

- Secured **First Rank with gold medal** in Master of Technology in Materials Engineering at National Institute of Technology Karnataka (NITK), India (1999)
- Ministry of Human Resource Development (MHRD), Government of India Scholarship for Ph.D. program during 2003-2008.

Poster Presentation Awards

2012 C. J. Reeves, **Pradeep L. Menezes**, Tien-Chien Jen, M. R. Lovell, Sarah Garvey, and Mark Dietz, *Tribological performance of environmentally-friendly ionic liquid lubricants for energy conservation and sustainability: Emerging technology in green tribology – A new class of lubricants*, ASME/STLE International Joint Tribology Conference (IJTC2012) – 1st Place

2012 C. J. Reeves, **Pradeep L. Menezes**, Tien-Chien Jen, M. R. Lovell, Sarah Garvey, and Mark Dietz, *Bio-Based Room Temperature Ionic Liquid Lubricants for energy conservation and sustainability,* ASME International Mechanical Engineering Congress and Exposition - 3rd place.

2012 C. J. Reeves, **Pradeep L. Menezes**, Tien-Chien Jen, M. R. Lovell, Sarah Garvey, and Mark Dietz, *Natural oil and novel ionic liquid lubricants for energy conservation and sustainability,* University of Wisconsin-Milwaukee, Milwaukee, USA, 2012 – 1st Place

2012 C. J. Reeves, **Pradeep L. Menezes**, T.-C. Jen, M. R. Lovell, Sarah Garvey, Mark Dietz, and A. Walker, *Room temperature ionic liquids as environmentally friendly lubricants: The next step in green tribology,* University of Wisconsin-Milwaukee – Milwaukee, USA, 2012 – 2nd Place

Invited Presentations

2019 *Tribology in Advanced Manufacturing,* University of Las Vegas, USA

2018 *Tribology in Manufacturing,* National Institute of Technology Karnataka, India

2016 *Tribology of self-lubricating composites, S*ociety for the Advancement of Material and Process Engineering, Reno, USA

2015 *Surface texturing to control friction and wear for energy efficiency and sustainability,* Department of Mechanical Engineering, University of Nevada, Reno, USA

2015 *Tribology in green and bio manufacturing,* Department of Mechanical Engineering, University of Nevada, Reno, USA

2010 *Environmentally friendly dry metal cutting processes for energy conservation and sustainability*, Energy Systems Laboratory, Argonne National Laboratory, Argonne, IL, USA.

2008 *Nano technology – Research and development*
Department of Physics, St. Philomena's College, Mangalore, India.

2006 *Nano technology – The present scenario*
National Metallurgical Day, Mangalore, India

Book Publication (4)

B1. **Pradeep L. Menezes**, Sudeep P. Ingole, Michael Nosonovsky, Satish V. Kailas and Michael R. Lovell, *Tribology for Scientists and Engineers*, Springer, USA, 2013.

B2. Emad Omrani, Pradeep K. Rohatgi, **Pradeep L. Menezes**, *Tribology and applications of self-lubricating materials*, CRC Press, USA. 2017,

B3. **Pradeep L. Menezes**, Pradeep K. Rohatgi, Emad Omrani, *Self-lubricating composites*, Springer, USA, 2018

B4. Arpith Siddaiah, Rahul Ramachandran, **Pradeep L. Menezes**, Tribocorrosion - Fundamentals, Methods, and Materials, Elsevier, 2020.

Peer Reviewed Journal Publications (Published: 104)

J1. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Studies on friction and transfer layer using inclined scratch,* Tribology International, 39(2), 175–183, 2006.

J2. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Effect of roughness parameter and grinding angle on coefficient of friction when sliding of Al-Mg alloy over EN8 steel*, ASME: Journal of Tribology, 128(4), 697-704, 2006.

J3. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of surface texture on coefficient of friction and transfer layer formation during sliding of pure magnesium pin on 080 M40 (EN8) steel plate*, Wear, 61(5-6), 578-591, 2006.

J4. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Effect of directionality of unidirectional grinding marks on friction and transfer layer formation of Mg on steel using inclined scratch test,* Materials Science and Engineering A, 429(1-2), 149-160, 2006.

J5. **P. L. Menezes,** Kishore and S. V. Kailas, *Studies on friction and transfer layer: Role of surface texture,* Tribology Letters, 24(3), 265-273, 2006.

J6. **Pradeep L. Menezes**, Kishore, Shimjith M. and Satish V. Kailas, *Influence of surface texture on friction and transfer layer formation in Mg-8Al alloy/steel tribo-system*, Indian Journal of Tribology, 2(1), 46-54, 2007.

J7. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Effect of surface roughness parameters and surface texture on friction and transfer layer formation in tin-steel tribo-system* , Journal of Materials Processing Technology, 208(1-3), 372-382, 2008.

J8. **Pradeep L. Menezes**, Kishore and Satish V. Kailas, *On the effect of surface texture on friction and transfer layer formation – A study using Al and steel pair,* Wear, 265(11-12), 1655-1669, 2008.

J9. **Pradeep L. Menezes**, Kishore and Satish V. Kailas, *Role of surface texture and roughness parameters in friction and transfer layer formation under dry and lubricated sliding conditions,* International Journal of Materials Research, 99(7), 795-807, 2008.

J10. **Pradeep L. Menezes**, Kishore and Satish V. Kailas, *Influence of roughness parameters of harder surface on coefficient of friction and transfer layer formation,* International Journal of Surface Science and Engineering, 2(1-2), 98-119, 2008.

J11. Pradeep Kumar C., **Pradeep L. Menezes** and Satish V. Kailas, *Role of surface texture on friction under boundary lubricated conditions,* Tribology Online, 3(1), 12-18, 2008.

J12. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Effect of surface topography on friction and transfer layer during sliding,* Tribology Online, 3(1), 25-30, 2008.

J13. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Studies on friction in iron-steel tribo-system under dry and lubricated conditions,* Materials and Manufacturing Processes, 23(7), 698-707, 2008.

J14. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of roughness parameters on coefficient of friction under lubricated conditions,* Sadhana, 33(3), 181-190, 2008.

J15. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Subsurface deformation and the role of surface texture – A study with Cu pins and steel plates,* Sadhana, 33(3), 191-201, 2008.

J16. K. R. Y. Simha, Annirudhan P., **Pradeep L. Menezes,** and Satish V. Kailas, *Friction tensor concept for textured surfaces,* Sadhana, 33(3), 203-206, 2008.

J17. A. Shankara, **Pradeep L. Menezes,** K. R. Y Simha and Satish V. Kailas, *Study of solid lubrication with MoS_2 coating in the presence of additives using reciprocating ball-on-flat scratch tester,* Sadhana, 33(3), 207-220, 2008.

J18. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Role of surface texture of harder surface on subsurface deformation,* Wear, 266(1-2), 103-109, 2009.

J19. **Pradeep L. Menezes,** K. Kumar, Kishore and Satish V. Kailas, *Influence of friction during forming processes – A study using numerical simulation technique,* International Journal of Advanced Manufacturing Technology, 40(11), 1067-1076, 2009.

J20. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of inclination angle of plate on friction, stick-slip and transfer layer - A study of magnesium pin sliding against steel plate,* Wear, 267(1-4), 476-484, 2009.

J21. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Studies on friction and formation of transfer layer when Al-4Mg alloy pins slid at various numbers of cycles on steel plates of different surface texture,* Wear, 267(1-4), 525-534, 2009.

J22. **Pradeep L. Menezes,** Kishore, Satish V. Kailas and Michael R. Lovell, *Studies on friction and formation of transfer layer in HCP metals,* ASME: Journal of Tribology, 131(3), 031604.1- 031604.9, 2009.

J23. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Study of friction and transfer layer formation in copper-steel tribo-system,* Tribology Transactions, 52(5), 611-622, 2009.

J24. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of roughness parameters and surface texture on friction during sliding of pure lead over 080 M40 steel,* International Journal of Advanced Manufacturing Technology, 43(7-8), 731-743, 2009.

J25. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of surface texture and roughness parameters on friction and transfer layer formation during sliding of aluminium pin on steel plate,* Wear, 267(9-10), 1534-1549, 2009.

J26. Michael R. Lovell, P. Cohen, **Pradeep L. Menezes,** and R. Shankar, *Tribological characterization of machining at very small contact areas,* ASME: Journal of Tribology, 131(4), 042201.1- 042201.7, 2009.

J27. Anirudhan P., **Pradeep L. Menezes** and Satish V. Kailas, *A parameter characterizing plowing nature of surfaces close to Gaussian,* Tribology International, 43(1-2), 370-380, 2010.

J28. **Pradeep L. Menezes,** Kishore, Satish V. Kailas and M. S. Bobji, *Influence of tilt angle of plate on friction and transfer layer - A study of aluminium pin sliding against steel plate,* Tribology International, 43(5-6), 897-905, 2010.

J29. **Pradeep L. Menezes,** Kishore, Satish V. Kailas and Michael R. Lovell, *Response of materials as a function of grinding angle on friction and transfer layer formation,* International Journal of Advanced Manufacturing Technology, 49(5), 485-495, 2010.

J30. **Pradeep L. Menezes,** Kishore and Satish V. Kailas, *Influence of die surface textures during metal forming- A study using experiments and simulation,* Materials and Manufacturing Processes, 25(9), 1030-1039, 2010.

J31. Michael R. Lovell, M. A. Kabir, **Pradeep L. Menezes**, and C. Fred Higgs III, *Influence of boric-acid additive size on green lubricant performance,* Philosophical Transactions of the Royal Society A, 368, 4851-4868, 2010.

J32. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *Influence of inclination angle and machining direction on friction and transfer layer formation,* ASME: Journal of Tribology, 133(1), 014501.1 - 014501.8, 2011.

J33. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *Role of surface texture, roughness and hardness on friction during unidirectional sliding,* Tribology Letters, 41(1), 1-15, 2011.

J34. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *Friction and transfer layer formation in polymer-steel tribo-system: Role of surface texture and roughness parameters,* Wear, 271(9-10), 2213-2221, 2011.

J35. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *The role of surface texture on friction and transfer layer formation during repeated sliding of Al-4Mg against steel,* Wear, 271(9-10), 1785-1793, 2011.

J36. **Pradeep L. Menezes,** Kishore, Satish V. Kailas and Michael R. Lovell, *Response of materials during sliding on various surface textures,* Journal of Materials Engineering and Performance, 20(8), 1438-1446, 2011.

J37. Pradeep K. Rohatgi, **Pradeep L. Menezes**, Tatiana Mazzei and Michael R. Lovell, *Tribological behaviour of aluminium micro- and nano- composites,* International Journal of Aerospace Innovations, 3(3), 153-162, 2011.

J38. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *Analysis of strain rates and microstructural evaluation during metal forming: Role of surface texture and friction,* Tribology Transactions, 55, 582-589, 2012.

J39. Caitlin Moore, **Pradeep L. Menezes**, Michael R. Lovell and Kurt Beschorner, *Analysis of the contribution of adhesion and hysteresis to shoe-floor lubricated friction in the boundary lubrication regime,*Tribology Letters, 47(3), 341-347, 2012.

J40. Caitlin Moore, **Pradeep L. Menezes**, Kurt Beschorner and Michael R. Lovell, *Analysis of shoe friction during sliding against floor material: Role of shoe roughness and fluid contamination,* ASME: Journal of Tribology, 134(4), 041104.1 – 04110477, 2012.

J41. **Pradeep L. Menezes,** Kishore, Satish V. Kailas and Michael R. Lovell, *Tribological response of soft materials sliding against hard surface textures at various numbers of cycles*, Lubrication Science, 25(2), 79-99, 2013.

J42. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *The role of strain rate response on abrasive wear behaviour of metals,* ASME: Journal of Tribology, 135(1), 011601.1 - 011601.7, 2013.

J43. Zbigniew Pater, Janusz Tomczak, Jaroslaw Bartnicki, Michael R. Lovell and **Pradeep L. Menezes**, *Experimental and numerical analysis of helical-wedge rolling process for producing steel balls*, International Journal of Machine Tools and Manufacture, 67, 1-7, 2013.

J44. Carlton J. Reeves, **Pradeep L. Menezes**, Michael R. Lovell and Tien-Chien Jen, *The size effect of boron nitride particles on the tribological performance of biolubricants for energy conservation and sustainability,* Tribology Letters, 51(3), 437-452, 2013.

J45. **Pradeep L. Menezes**, Michael R. Lovell, Ilya V. Avdeev, Jeen-Shang Lin and C. Fred Higgs III, *Studies on the formation of discontinuous chips during rock cutting using an explicit finite element model,* International Journal of Advanced Manufacturing Technology, 70(1), 635-648, 2014.

J46. **Pradeep L. Menezes**, Ilya V. Avdeev, Michael R. Lovell, and C. Fred Higgs III, *An explicit finite element model to study the influence of rake angle and friction during orthogonal metal cutting,* International Journal of Advanced Manufacturing Technology, 73(5), 875-885, 2014.

J47. **Pradeep L. Menezes**, Michael R. Lovell, Ilya V. Avdeev, and C. Fred Higgs III, *Studies on the formation of discontinuous rock fragments during cutting operation,* International Journal of Rock Mechanics and Mining Sciences, 71, 131-142, 2014.

J48. **Pradeep L. Menezes**, Kishore, Satish V. Kailas and Michael R. Lovell, *Influence of surface texture and roughness of softer and harder counter materials on friction during sliding*, Journal of Materials Engineering and Performance 24(1), 393-403, 2015.

J49. Carlton J. Reeves, **Pradeep L. Menezes**, Michael R. Lovell and Tien-Chien Jen, *The influence of surface roughness and particulate size on the tribological performance of bio-based multi-functional hybrid lubricants*, Tribology International, 88, 40-55, 2015.

J50. Afsaneh D. Moghadam, Emad Omrani, **Pradeep L. Menezes**, Pradeep K. Rohatgi, *Mechanical and tribological properties of self-lubricating metal matrix nanocomposites reinforced by carbon nanotubes (CNTs) and graphene – A review*, Composites Part B, 77, 402-420, 2015.

J51. Carlton J. Reeves, **Pradeep L. Menezes**, Tien-Chien Jen, Michael R. Lovell, *The influence of fatty acids on tribological and thermal properties of natural oils as sustainable biolubricants*, Tribology International, 90, 123-134, 2015.

J52. Matthew J. H. Cowap, Seyed R. M. Moghaddam, **Pradeep L. Menezes**, Kurt E. Beschorner, *Contributions of adhesion and hysteresis to the coefficient of friction between shoe and floor surfaces: Effects of floor roughness and sliding speed*, Tribology - Materials, Surfaces & Interfaces, 9(2), 77-84

J53. Emad Omrani, Afsaneh D. Moghadam, **Pradeep L. Menezes**, Pradeep K. Rohatgi, *Influence of graphite reinforcement on the tribological behavior of self-lubricating aluminum matrix composites – A Review*, International Journal of Advanced Manufacturing Technology, 83(1), 325-346, 2016.

J54. Meysam Tabandeh-Khorshid, Emad Omrani, **Pradeep L. Menezes**, Pradeep K. Rohatgi, *Tribological performance of self-lubricating aluminum matrix nanocomposites: Role of graphene nanoplatelets*, Engineering Science and Technology**,** 19(1), 463-469, 2016.

J55. **Pradeep L. Menezes**, Satish V. Kailas, *Role of surface texture and roughness parameters on friction and transfer film formation when UHMWPE sliding against steel*, Biosurface and Biotribology, 2(1), 1-10, 2016.

J56. Bamdad Barari, Emad Omrani, Afsaneh Dorri Moghadam, **Pradeep L. Menezes**, Krishna M. Pillai, Pradeep K. Rohatgi, *Mechanical, physical and tribological characterization of nano-cellulose fibers reinforced bio-epoxy composites: An attempt to fabricate and scale the 'Green' composite*, Carbohydrate Polymers, 147, 282–293, 2016.

J57. Emad Omrani, **Pradeep L. Menezes**, Pradeep K. Rohatgi, *State of art on tribological behavior of polymer matrix composites reinforced with natural fibers in the green materials world*, Engineering Science and Technology 19(2), 717–736, 2016.

J58. **Pradeep L. Menezes**, *Surface texturing to control friction and wear for energy efficiency and sustainability*, International Journal of Advanced Manufacturing Technology, 85(5), 1385–1394, 2016.

J59. Emad Omrani, Afsaneh Dorri Moghadam, Mahmoud Algazzar, **Pradeep L. Menezes,** Pradeep K. Rohatgi, *Effect of graphite particles on improving tribological properties Al-16Si-5Ni-5Graphite self-lubricating composite under fully flooded and starved lubrication conditions for transportation applications*, The International Journal of Advanced Manufacturing Technology, 87(1), 929–939, 2016.

J60. **Pradeep L. Menezes**, I*nfluence of friction and rake angle on the formation of built-up edge during the rock cutting process*, International Journal of Rock Mechanics and Mining Sciences, 88, 175–182, 2016.

J61. Afsaneh Dorri Moghadam, Emad Omrani**, Pradeep L. Menezes,** Pradeep K. Rohatgi, *Effect of in-situ processing parameters on the mechanical and tribological properties of self-lubricating hybrid aluminum nanocomposites*, Tribology Letters 62(25), 1-10, 2017

J62. Arpith Siddaiah, **Pradeep L. Menezes**, *Advances in bio-inspired tribology for engineering applications*, Journal of Bio- and Tribo-Corrosion, 2(23), 1-19, 2017.

J63. Andrei Bogatov, Maxim Yashin, Mart Viljus, **Pradeep Menezes**, Vitali Podgursky, *Comparative analysis of two methods for evaluating wear rate of nanocrystalline diamond films*, Key Engineering Materials, 721, 345-350, 2017.

J64. Maxim Yashin, Janis Baroninš, **Pradeep L. Menezes**, Mart Viljus, Taavi Raadik, Andrei Bogatov, Maksim Antonov, Vitali Podgursky, *Wear rate of nanocrystalline diamond coating under high temperature sliding conditions*, Solid State Phenomena, 267, 219-223, 2017.

J65. Carlton J. Reeves, Arpith Siddaiah, **Pradeep L. Menezes**, *A review on the science and technology of natural and synthetic biolubricants*, Journal of Bio- and Tribo-Corrosion, 3(11), 1-27, 2017.

J66. Carlton J. Reeves, **Pradeep L. Menezes**, *Evaluation of boron nitride particles on the tribological performance of avocado and canola oil for energy conservation and sustainability*, The International Journal of Advanced Manufacturing Technology, 89, 9-12, 2475–3486, 2017.

J67. **Pradeep L. Menezes**, *Influence of rock mechanical properties and rake angle on the formation of rock fragments during cutting operation*, The International Journal of Advanced Manufacturing Technology, 90(1-4), 127–139, 2017.

J68. **Pradeep L. Menezes**, *Influence of cutter velocity, friction coefficient and rake angle on the formation of discontinuous rock fragments during rock cutting process*, The International Journal of Advanced Manufacturing Technology, 90(9-12), 3811–3827, 2017.

J69. Arpith Siddaiah, Zulfiqar Khan, Rahul Ramachandran, **Pradeep L. Menezes**, *Performance analysis of retrofitted tribo-corrosion test rig for monitoring in situ oil conditions*, Materials, 10(10), 1145-1 -1145-17, 2017.

J70. Carlton J. Reeves, Arpith Siddaiah, **Pradeep L. Menezes**, *Ionic liquids: A plausible future of bio-lubricants*, Journal of Bio- and Tribo-Corrosion, 3(18), 1-8, 2017.

J71. Carlton J. Reeves, Arpith Siddaiah, **Pradeep L. Menezes**, *Tribological study of imidazolium and phosphonium ionic liquid-based lubricants as additives in carboxylic acid-based natural oil: Advancements in environmentally friendly lubricants*, Journal of Cleaner Production, 176, 241-250, 2018.

J72. Mian Hammad Nazir, Zulfiqar Ahmad Khan, Adil Saeed, Arpith Siddaiah, **Pradeep L. Menezes**, *Synergistic wear-corrosion analysis and modelling of nanocomposite coatings*, Tribology International, 121, 30-44, 2018.

J73. Bo Mao, Arpith Siddaiah, **Pradeep L. Menezes**, Yiliang Liao, *Surface texturing by indirect laser shock surface patterning for manipulated friction coefficient*, Journal of Materials Processing Technology, 257, 227-233, 2018.

J74. Ashish K. Kasar, Guoping Xiong, **Pradeep L. Menezes**, *Graphene-reinforced metal and polymer matrix composites*, JOM, 70(6), 829-836, 2018.

J75. Ashish K. Kasar, **Pradeep L. Menezes**, *Synthesis and recent advances in tribological applications of graphene*, The International Journal of Advanced Manufacturing Technology, 97(9-12), 3999-4019, 2018.

J76. Ashish K. Kasar, Rahul Ramachandran, **Pradeep L. Menezes**, *Natural Adhesion System Leads to Synthetic Adhesives*, Journal of Bio- and Tribo-Corrosion, 4:43, 1-17, 2018

J77. Arpith Siddaiah, Bo Mao, Yiliang Liao, **Pradeep L. Menezes**, *Surface characterization and tribological performance of laser shock peened steel surfaces*, Surface and Coating Technology, 351, 188-197, 2018.

J78. Arjun Manoj, Ashish K. Kasar, **Pradeep L. Menezes**, *Tribocorrosion of porous titanium used in biomedical applications*, Journal of Bio- and Tribo-Corrosion, 5:3, 1-16, 2019.

J79. Arpith Siddaiah, Ashish K. Kasar, Arjun Manoj, **Pradeep L. Menezes**, *Influence of environmental friendly multiphase lubricants on the friction and transfer layer formation during sliding against textured surfaces*, Journal of Cleaner Production, 209, 1245-1251, 2019.

J80. Carlton J. Reeves, Arpith Siddaiah, **Pradeep L. Menezes**, *Friction and wear behavior of environmentally friendly ionic liquids for sustainability of biolubricants*, ASME: Journal of Tribology, 141(5), 051604;1-11, 2019.

J81. Emad Omrani, **Pradeep L. Menezes**, Pradeep K. Rohatgi, *Effect of micro- and nano-sized carbonous solid lubricants as oil additives in nanofluid on tribological properties*, Lubricants, 7(3), 1-13, 2019.

J82. Massoud Malaki, Wenwu Xu, Ashish K. Kasar, **Pradeep L. Menezes**, Hajo Dieringa, Rajender S. Varma, Manoj Gupta, *Advanced Metal Matrix Nanocomposites*, Metals, 9(330), 1-39, 2019.

J83. Ashish Kasar, Arpith Siddaiah, Rahul Ramachandran, **Pradeep L. Menezes**, *Tribocorrosion performance of tool steel for rock drilling process*, Journal of Bio- and Tribo-Corrosion, 5:54, 1-8, 2019.

J84. Arpith Siddaiah, Ashish K. Kasar, Vishal Khosla, **Pradeep L. Menezes**, *In-situ fretting wear analysis of electrical connectors for real system applications*, Journal of Manufacturing and Materials Processing, 3(2), 47, 1-12, 2019.

J85. Ashish K. Kasar, **Pradeep L. Menezes**, *Surface engineering of solar cells to improve efficiency*, JOM, 71(12), 4319–4329, 2019.

J86. Alessandro Ralls, Pankaj Kumar, Mano Misra, **Pradeep L. Menezes**, *Material design and surface engineering for bio-implants*, JOM, 1-13, 2019.

J87. Bo Mao, Arpith Siddaiah, Xing Zhang, Bin Li, **Pradeep L .Menezes**, Yiliang Liao, *The influence of surface pre-twinning on the friction and wear performance of an AZ31B Mg alloy*, Applied Surface Science, 480, 998-1007, 2019.

J88. Bo Mao, Xing Zhang, **Pradeep L. Menezes**, Yiliang Liao, *Anisotropic microstructure evolution of an AZ31B magnesium alloy subjected to dry sliding and its effects on friction and wear performance*, Materialia, 8, 2019, 100444.

J89. Arpith Siddaiah, Pankaj Kumar, Artie Henderson, Manoranjan Misra, **Pradeep L. Menezes**, *Surface energy and tribology of electrodeposited Ni and Ni-graphene coating on steel*, Lubricants, 7, 2019, 87:1-15.

J90. Dipen Kumar Rajak, Durgesh D. Pagar, **Pradeep L. Menezes**, Emanoil Linul, *Fiber reinforced polymer composites: Manufacturing, properties, and applications*, Polymers, 11(10), 2019, 1667:1-37.

J91. Zachary W. Monette, Ashish K. Kasar, **Pradeep L. Menezes**, *Advances in Triboluminescence and Mechanoluminescence*, Journal of Materials Science: Materials in Electronics, 30(22), 19675–19690, 2019.

J92. Andrei Bogatov, Vitali Podgursky, Heinar Vagiström, Maxim Yashin, Asad A. Shaikh, Mart Viljus, **Pradeep L. Menezes**, Iosif S. Gershman, *Transition from self-organized criticality into self-organization during sliding Si3N4 balls against nanocrystalline diamond films*, Entropy, 21, 1055: 1-12, 2019.

J93. Dipen K. Rajak, P. H. Wagh, **Pradeep L. Menezes**, Anisha Chaudhary, Ravinder Kumar, *Critical overview of coatings technology for metal matrix composites*, Journal of Bio- and Tribo-Corrosion, 6:12, 1-18, 2020.

J94. Xing Zhang, Bo Mao, Arpith Siddaiah, **Pradeep L. Menezes**, Yiliang Liao, *Direct laser shock surface patterning of an AZ31B magnesium alloy: Microstructure evolution and friction performance*, Journal of Materials Processing Technology, 275, 116333:1-7, 2020.

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c76. Arpith Siddaiah, Ashish K Kasar, **Pradeep L. Menezes**, *Investigation and synthesis of multifunctional graphene-nanocomposite coatings on magnesium alloys*, AeroMat 2019, Reno, USA, 2019.

c77. Ashish K Kasar, Arpith Siddaiah, **Pradeep L. Menezes**, *Control of tribological properties of alumina base composite by formation of in situ phases*, AeroMat 2019, Reno, USA, 2019.

c78. Bo Mao, Arpith Siddaiah, **Pradeep L. Menezes**, Yiliang Liao, *A novel laser shock surface patterning process toward tribological applications*, International Manufacturing Science and Engineering Conference (MSEC2019), Pennsylvania, USA, 2019.

c79. Pankaj Kumar, Arpith Siddaiah, Javed Akram, **Pradeep L. Menezes**, Mano Misra, *Tribocorroison behavior of Inconel 718 fabricated by Laser powder Bed Fusion based Additive Manufacturing*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

c80. Pankaj Kumar, Arpith Siddaiah, Ashish Kasar, Javed Akram, **Pradeep L. Menezes**, Mano Misra, *Wear-Corrosion Synergism behavior of Additive Manufactured Ti-6Al-4V Alloy*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

c81. Pankaj Kumar, B. Vadlamani, Arpith Siddaiah, Prasad R. Kalvala, **Pradeep L. Menezes**, R. Daroonparvar, C. Kay, Mano Misra, *Microstructure Evaluation and Corrosion Behavior of Cold Spray Deposited Tantalum Coating*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

c82. Pankaj Kumar, Arpith Siddaiah, J. Du, **Pradeep L. Menezes**, Mano Misra, *Wear-Corrosion Synergism Behavior of Molybdenum-Rhenium-Tellurium Alloys for Structural Application in Molten Salt Reactor*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

c83. Arpith Siddaiah, Pankaj Kumar, Mano Misra, **Pradeep L. Menezes**, *Effect of tribocorrosion on the bond strength of electrodeposited Ni-Graphene composite surface coatings on AZ31B Mg alloys*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

c84. Bo Mao, Arpith Siddaiah, X. Zhang, Bin Li, **Pradeep L. Menezes**, Yiliang Liao, *Improving the tribological performance of magnesium alloys by laser shock peening*, Materials Science and Technology (MS&T), Oregon, USA, 2019.

Other Publications

1. October 2019: Cover Story article: Controlling surface topography published in the Tribology & Lubrication Technology (TLT) magazine.
2. October 2019: News on Microstructure evaluation and corrosion behavior of cold spray deposited tantalum coatings published on ASM International.
3. July 2019: Featured article: Bearing the load published in the Tribology & Lubrication Technology (TLT) magazine.

Teaching

At University of Nevada Reno

2020 **Introduction to Tribology** (ME 456/656) course - Spring 2020.
2019 **Introduction to Tribology** (ME 456) course - Spring 2019.
2019 **Advanced Tribology** (ME 757) New graduate course - Spring 2019.
2018 **Surface Engineering** (ME 756) New graduate course - Fall 2018.
2018 **Introduction to Tribology** (ME 456/656) course - Spring 2018.
2017 **Mechanical Design** (ME 351) course - Fall 2017.
2017 **Introduction to Tribology** (ME 456/656) new undergraduate/graduate course - Spring 2017.
2016 **Mechanical Design** (ME 351) course - Fall 2016.
2016 **Mechanical Design** (ME 351) course - Spring 2016.
2015 **Friction and Wear** (ME 493 and ME 791) new undergraduate/graduate course - Fall 2015.

At University of Wisconsin-Milwaukee and Other Universities

2015 **Friction and Wear** (MECHENG 465 and MATL 465) course for Mechanical Engineering and Materials Engineering graduate and undergraduate students at University of Wisconsin-Milwaukee during Spring 2015.

2015 **Engineering Drawing/CAD/Drafting** (IND 112) course for Industrial and Manufacturing Engineering undergraduate students at University of Wisconsin-Milwaukee during Spring 2015.

2014 **Manufacturing Processes** (IND 350) course for Industrial and Manufacturing Engineering undergraduate students at University of Wisconsin-Milwaukee during Fall 2014.

2014 **Engineering Composites** (MECHENG 457 and MATL 457) course for Mechanical Engineering and Materials Engineering graduate and undergraduate students at University of Wisconsin-Milwaukee during Spring 2014.

2013 **Friction and Wear** (MECHENG 465 and MATL 465) course for Mechanical Engineering and Materials Engineering graduate and undergraduate students at University of Wisconsin-Milwaukee during Fall 2013.

2012 **Friction and Wear** (MECHENG 465 and MATL 465) course for Mechanical Engineering and Materials Engineering graduate and undergraduate students at University of Wisconsin-Milwaukee during Spring 2012.

2007 **Materials and Manufacturing** course for Master of Science (M.Sc.) in Materials Science students of Jain University, Bangalore, India, as a visiting faculty during 2007.

Advising

Graduate Student Advising (primary advisor) (total: 6)

1. Arjun Manoj, (2017-2019) – Graduated MS in Dec 2019
2. Arpith Siddaiah, (2015-2020) – Graduated PhD in June 2020
3. Zac Monette, (2017-present) – Graduating MS in June 2020
5. Ashish Kasar, (2016-present) – PhD student
4. Alessandro Ralls, (2018-present) – PhD student
6. Soumya Sikdar, (2019-present) – PhD student.
7. Md Hafizur Rahman, (2020-present) – PhD student.

Post-Doctoral Fellows or Research Associates Supervised

1. Carlton Reeves, Mechanical Engineering, UNR (2015-present)
2. Emad Omrani, Mechanical Engineering, UNR (2018-present)

Co-Supervision

1. Bo Mao, Mechanical Engineering, UNR (2016-2020) – Graduated PhD (Advisor: Yiliang Liao, ME)
2. Luan Nguyen, Computer Science and Engineering, UNR (2017-2018) (Advisor: Hung La, CSE)

Undergraduate Advising

1. Nelson Aquino Jr
2. Carson Sawchuk
3. Natali Salas-Espana
4. Valerie Pober

Capstone Group Student Mentoring (14 students)

Friction stir welding - 5 students, 2016

Abrasion Tester – 5 students, 2016
Scratch tester – 4 students, 2017

Examination Committee

Doctoral Student Committee Member (total: 8)

1. Emad Omrani (advisor: Prof. Pradeep K. Rohatgi), Ph.D. in Materials Engineering, Thesis defense committee, University of Wisconsin Milwaukee, 2017.
2. Joao Paulo Braz, (advisor: Prof. Eric Wang), Mechanical Engineering, Thesis defense committee, UNR, 2018.
3. Bo Mao, (advisor: Prof. Yiliang (Leon) Liao), Mechanical Engineering, Thesis defense committee, UNR, 2020.
4. Luoxia Cao, (advisor: Prof. Feifei Fan), Mechanical Engineering, Thesis defense committee, UNR, 2019.
5. Manish Jain (advisor: Prof. Sid Pathak), Chemical and Materials Engineering, Thesis defense committee, UNR, 2019.
6. Kodi L Summers, (advisor: Prof. Dev Chidambaram), Chemical and Materials Engineering, Thesis defense committee, UNR, 2019.
7. Soumya Verma, (advisor: Prof. Sid Pathak), Chemical and Materials Engineering, Thesis defense committee, UNR, 2019.
8. Duke Culbertson, (advisor: Prof. Dev Chidambaram), Chemical and Materials Engineering, Thesis defense committee, UNR, 2019.

Master Student Committee Member (Thesis plan) (total: 4)

1. Amanda Nelson, (advisor: Dr. Eric Wang), MS in Mechanical Engineering, UNR, 2017.
2. Devin Connell, (advisor: Dr. Hung La), MS in Computer Science and Engineering, UNR, 2017.
3. Kodi Summers, (advisor: Dr. Dev Chidambaram), MS in Chemical and Materials Engineering, UNR, 2016
4. James Mulcahy, (advisor: Dr. Dev Chidambaram), MS in Chemical and Materials Engineering, UNR, 2016
5. Mackenzie Parker, (advisor: Dr. Dev Chidambaram), MS in Chemical and Materials Engineering, UNR, 2016

Professional Service Activities

Convener

- Tribology consortium, University of Wisconsin-Milwaukee, 2008-2015

Society Membership

- Society of Tribologists and Lubrication Engineers (STLE), 2009-Present

Conference Organizer

- Materials Tribology session - Materials Tribology at Materials Science & Technology 2016,
- Advanced Coatings for Wear and Corrosion Protection at Materials Science & Technology 2017,
- Surface Engineering, STLE, 2017
- Solid State Processing of Metals and Composites at Materials Science & Technology 2020

Associate Editor

- Coatings;
- Advanced Sustainable Engineering;
- Applied Chemical Engineering;
- Material Science Research India;

Editorial Board Member

- The Scientific World Journal;
- Indian Journal of Materials Science,
- Journal of Metallurgical Science,
- Advances in Materials Science and Engineering,
- International Scholarly Research Notices,
- Journal of Metallic Material Research,
- Journal of Biotechnology and Bioengineering,
- International Journal of Aeronautical Science & Aerospace Research,
- Non-Metallic Material Science
- Material Science Research India
- Applied chemical engineering

Guest Co-editor (Special Issue)

- International Journal of Corrosion, Wear-Corrosion Synergy special issue (2017-2018)

Journal Reviewer (for over 50 journals)

Advances in Mechanical Engineering; Advances in Tribology; Applied Physics A; Applied Sciences; Applied Surface Science; Carbon; Coatings; Composites Science and Technology; Construction and Building Materials; Energies; Engineering Failure Analysis; Fuel; International Journal of Advanced Manufacturing Technology; Indian Journal of Materials Science; International Journal of Materials Research; International Journal of Parallel, Emergent and Distributed Systems; International Journal of Rock Mechanics and Mining Sciences; ISRN Tribology; Journal of Biological and Chemical Sciences; Journal of Bio- and Tribo-Corrosion; Journal of Chemical and Biological Intefaces; Journal of Coating Science and Technology; Journal of Composite Materials; Journal of Engineering Manufacture; Journal of Materials Engineering and Performance; Journal of Engineering Tribology; Journal of Functional Biomaterials; JOM; Journal of Materials Research and Technology; Journal of Materials Science; Journal of Materials Science: Materials in Electronics (JMSE); Journal of the Mechanical Behavior of Biomedical Materials; Journal of Mechanical Engineering Science; Journal of Micro and Nano-Manufacturing; Journal of Microscopy; Journal of Molecular and Engineering Materials; Journal of Testing and Evaluation; Journal of Tribology; Langmuir; Lubrication Science; Materials, Materials Characterization; Materials and Design; Materials Science and Engineering A; Material Science Research India; Mechatronics; Metallurgical & Materials Engineering; Metals; Philosophical Transactions of the Royal Society A; RSC Advances; Scientific Reports; Simulation Modelling Practice and Theory; Surface and Coating Technology; Surface Topography: Metrology and Properties; Tribology International, Tribology Transactions; Wear; Tribology Letters;

PhD Thesis Reviewer

- Visvesvaraya Technological University, India, 2011, 2014, 2017, 2018, 2019 (2)
- Sardar Vallabhbhai National Institute of Technology, India, 2017, 2018, 2019.
- National Institute of Technology Karnataka, India, 2015
- University of Wisconsin-Milwaukee, USA, 2013

M.S Thesis Reviewer

- University of Wisconsin-Milwaukee, USA, 2013

Conference Paper Reviewer

- Wear of Materials 2009; 2011, 2017, 2019
- The Sustainable Materials Processing and Manufacturing conference, 2017, 2019
- STLE/ASME International Joint Tribology conference 2009; 2010; 2011
- Metallurgical Coatings and Thin Films 2011

Book Proposal Reviewer

- Tribo-science and Tribo-technology (2014)
- Application Status and Development Strategy (2014)
- Tribological Engineering – Science of Engineering Interfaces, Elsevier, 2015
- Tribology testing to replicate the real world (2016),
- Tribology testing to replicate the real world, Elsevier, 2016
- Book series in Tribology, Elsevier, 2018
- Tribology and Sustainability, CRC, 2020

Book Chapters Reviewer

- Green Tribology (2012)
- Tribology for Scientist and Engineer (2013)
- Friction-Induced Vibrations and Self-organization (2014)
- Self-Lubricating Composites (2017)
- An Introduction to Composite Materials (2018)

Session Chair

- STLE/ASME International Joint Tribology conference 2009 (2)
- STLE/ASME International Joint Tribology conference 2010 (3)
- STLE Annual Meeting and Exhibition 2011
- STLE/ASME International Joint Tribology conference 2011 (2)

International Conference Committee:

- Committee, Sustainable Materials Processing and Manufacturing, South Africa, 2017, 2019
- International Conference on Energy, Environment, and Materials Science, 2018.
- International Conference on Emerging Intelligent Techniques in Engineering and Education: Innovations and Applications 2020

- 4th International Conference on Materials Science and Mechanical Manufacturing Engineering 2020.
- Latest Trends in Nanoscience and Nanotechnology, Gulbarga, India, 2011
- International Conference on Advances in Tribology and Engineering Systems, Gujarat, India, 2013

Poster Judge

2012 Student Research Poster Competition, University of Wisconsin-Milwaukee

Grant Reviewer

- DoE Technology Commercialization Fund (TCF) Review, 2020
- DOE, 2018
- Nazarbayev University Research/ORAU, 2020.
- National Science Foundation, Ad Hoc Reviewer, 2019.
- United States Department of Agriculture (USDA), Ad Hoc Reviewer, 2019.
- Kuwait Foundation for the Advancement of Sciences, 2019.
- German Federal Ministry of Education and Research (BMBF), 2020 (2)
- Czech Science Foundation 2013, 2014, 2015, 2016, 2017, 2018
- ARO Core Programs, 2016
- Austrian Science Fund (FWF) 2016
- UW-Milwaukee Research Growth Initiative 2016, 2018
- Mitacs Elevate Inc, 2018
- NASA EPSCoR, 2018,
- R&D Faculty Grant, India 2013
- Netherlands Technology Foundation 2014

ME Department Service at UNR

Participated in the following Department Committees:

1. Member of the ME Laboratory Committee, Department of Mechanical Engineering, University of Nevada, Reno: Fall 2015-present
2. Member of the Curriculum Committee, Department of Mechanical Engineering, University of Nevada, Reno: Fall 2015-2019.
3. Member of the Search Committee for one tenure-track faculty positions in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2015-Spring 2016
4. Member of the Search Committee for three tenure-track faculty positions in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2016-Spring 2017
5. Member of the Search Committee for two tenure-track manufacturing faculty positions in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2018-Spring 2019
6. Member of the ABET committee in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2018-Spring 2019
7. Member of the Search Committee for Development Technician position in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2016-Spring 2017.
8. Member of the Search Committee for three lecturer positions (capstone, lab and shared) in the Department of Mechanical Engineering, University of Nevada, Reno: Fall 2016-Spring 2017
9. Member of the Minor on Manufacturing Quality/product excellence Committee, Department of Mechanical Engineering, University of Nevada, Reno: Fall 2016-Spring 2017.

10. Qualifying examiner, Department of Mechanical Engineering, University of Nevada, Reno: Fall 2018-present.

Outreach and Engagement

- Truckee High School STEM fair, 2016
- Spanish Springs High School Career Fair, 2016
- Wooster High School, Career Fair 2016
- 8th graders visiting from Inyo County, 2016
- Nevada Bound Tours, 2016, 2017, 2018, 2019, 2020
- Engineer's Day tour, 2016, 2017, 2018, 2019
- Best and Brightest event 2017, 2018, 2019
- Manufacturing summer camp at UNR, 2018, 2019