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EDUCATION

Seoul National University Ph.D., Mechanical & Aerospace Engineering <ul style="list-style-type: none">Korean Government Scholarship	Seoul, Korea 2010-2014
Myongji University M.S., Mechanical Engineering <ul style="list-style-type: none">Graduate Scholarship	Yongin, Korea 2007-2009
Kathmandu University B.S., Mechanical Engineering <ul style="list-style-type: none">UG studies Scholarship	Kathmandu, Nepal 2000-2004

EXPERIENCE

Woosong University (Daejeon, Korea) Department Chair of Department of Railroad Integrated Systems	Daejeon, Korea Nov 2016 – Till date
Woosong University (Daejeon, Korea) Assistant Professor	Daejeon, Korea 2015-Till date
Seoul National University (Seoul, Korea) Post-Doctoral Fellow	Seoul, Korea 2014-2015

PEER-REVIEWED INTERNATIONAL JOURNAL PUBLICATIONS

1. **Bhandari, Binayak**, Park, Gi-Jun, "Development of a real-time security management system for restricted access areas using computer vision and deep learning" Journal of Transportation Safety & Security (Accepted, 4th August 2020)
2. **Bhandari, Binayak**, Lee, MinKyo, "Haptic identification of objects using tactile sensing and computer vision" Advances in Mechanical Engineering, Vol 11, Issue 4, pp. 1-8, April 2019
3. Lee, MinKyo, **Bhandari, Binayak**, "The application of aerodynamic brake for high-speed trains", Journal of Mechanical Science and Technology, Vol 32, Issue 12 pp. 5749-5754, December 2018
4. Kim, D.H., Kim, T.Y.J, Wang, X., Kim, M., Quan, Y.J., Oh, J.W., Min, S.H., Kim, H. **Bhandari, B.** Yang. I., Ahn, S.H.," Smart Machining Process Using Machine Learning: A Review and Perspective on Machining Industry", International Journal of Precision Engineering and Manufacturing-Green Technology" Vol 5, Issue 4. pp 555-568, August 2018 (IF 4.561)
5. **Bhandari, B.**, Lee, K.T., Lee, C.S., Song, C.K., Maskey, R.K., and Ahn, S.H., "A novel off-grid hybrid power system comprised of solar photovoltaic, wind, and hydro energy sources", Applied Energy, Elsevier, Vol. 133, No. 15, pp. 236-242, November 2014 (SCI, I.F. 5.261, DOI: 10.1016/j.apenergy.2014.07.033) (IF 8.426) (Cited: 132 times as of 13th Dec 2019)
6. **Bhandari, B.**, Lee, K.T, Chu, WS., Lee, CS., Song, CK., Bhandari, P., and Ahn, SH., "Socio-economic impact of the renewable energy-based power system in mountainous villages of Nepal" International Journal of Precision Engineering and Manufacturing-Green Technology, Volume 4, Issue 1, pp 37-44, 2017 (IF 4.561)
7. **Bhandari, B.**, Ahn, Tae-Bong, Ahn, and Sung-Hoon, "Optimization of hybrid renewable energy power system for remote installations: case studies for mountain and island" International Journal of Precision Engineering and Manufacturing, Springer Verlag GmbH, Vol.17, N0.6, pp 815-822, 2016 (IF 1.779)

8. **Bhandari, B.**, Poudel, S. R., Lee, K. T. and Ahn, S. H., "Mathematical Modeling of Hybrid Renewable Energy System: A Review on Small Hydro-Solar-Wind Power Generation," International Journal of Precision Engineering and Manufacturing-Green Technology, The Korean Society for Precision Engineering (Korea), in co-publication with Springer Verlag GmbH, Vol. 1, No. 2, pp. 157-173, 2014 (SCIE, ISSN: 2234-7593) (**IF 4.561**) (Cited: 159 times as of 13th Dec 2019)
9. Pratibha Bhandari, JeongEun Bak, Kang-Sung Lee, Yun Chon, Anuj Bhattachan, Pradip Rimal, Biswo Ram Shrestha, **Binayak Bhandari**, Jeong-Ook Moon, Namkyu Wu, Won-Shik Chu, Chul-Ki Song, Caroline S Lee, Vittal Mogasale, Sung-Hoon Ahn, "Assessment of Social-Demographic Factors, Mother and Child Health Status, Water, Sanitation, and Hygienic Conditions Existing in a Hilly Rural Village of Nepal," International Journal of Environmental Research and Public Health, Vol 16, issue 20 pp 3965, 2019 (**IF 2.145**)
10. Gil-Yong Lee, Mincheol Kim, Ying-Jun Quan, Min-Sik Kim, Thomas Joon Young Kim, Hae-Sung Yoon, Sangkee Min, Dong-Hyeon Kim, Jeong-Wook Mun, Jin-Woo Oh, In Gyu Choi, Chung-Soo Kim, Won-Shik Chu, Jinkyu Yang, **Binayak Bhandari**, Choon-Man Lee, Jeong-Beom Ihn, Sung-Hoon Ahn, "Machine health management in the smart factory: A review", Journal of Mechanical Science and Technology, Vol 32, Issue 3, Pages 987-1009, March 2018 (**IF 1.221**)
11. **Bhandari, B.**, Lee, K. T., Cho, Y.M. and Ahn, S. H., "Optimization of Hybrid Renewable Energy Power System: A Review," International Journal of Precision Engineering and Manufacturing-Green Technology, IJPEM-GT, Vol. 2, No. 1, pp. 99-112, 2015 (**IF 3.774**) (Cited: 141 times)
12. **Bhandari, B.**, Hong, Y. S., Yoon, H.S., Moon, J.S., Pham, M.Q., Lee, G.B., Huang, Y., Linke, B.S., Dornfeld, D.A., Ahn, S.H., "Development of a Micro-Drilling Burr-Control Chart for PCB Drilling" Journal of Precision Engineering, Vol. 38, Issue 1, pp-221-229, 2014 (**IF 2.582**)
13. **Bhandari, B.**, Lee, G. Y., and Ahn, S. H., "A review on IPMC material and actuators and sensors: fabrication, characterization and applications," International Journal of Precision Engineering and Manufacturing, IJPEM, The Korean Society for Precision Engineering (Korea), in co-publication with Springer Verlag GmbH, Vol. 13, No. 1, pp. 141-163, 2012 (**IF 1.661**) (Cited: 133 times)
14. Rodrigue, H., **Bhandari, B.**, Han, M. W., Ahn, S. H., "A Shape Memory Alloy-Based Soft Morphing Actuator Capable Of Pure Twisting Motion," Journal of Intelligent Material Systems and Structures, Vol. 26, No. 9, 2014 (**IF 2.211**)
15. Won-Shik Chu, Min-Soo Kim, Kyung-Tae Lee, **Binayak Bhandari**, Gil-Yong Lee, Hae-Sung Yoon, Hyung-Soo Kim, Jae-il Park, Erkhés Bilegt, Jang-Yeob Lee, Ji-Hyun Song, Gee-Hoon Park, Pratibha Bhandari, Caroline Sunyong Lee, Chulki Song, Sung-Hoon Ahn, "Design and performance evaluation of Korean traditional heating system—Ondol: Case study of Nepal" Energy and Buildings, Vol 138 Pages 406-414, 2017 (**IF 4.457**)
16. Rodrigue, H., Wang, W., **Bhandari, B.**, Han, M. W., Ahn, S. H., "Cross-Shaped Twisting Structure Using SMA-Based Smart Soft Composite," International Journal of Precision Engineering and Manufacturing-Green Technology, Vol. 1, No. 2, pp. 153-156, 2014 (**IF 3.774**)
17. Rodrigue, H., **Bhandari, B.**, Wang, W. and Ahn, S. H., "3D Soft Lithography: A Fabrication Process for Thermocurable Polymers," Journal of Materials Processing Technology, Volume 217, March 2015, Pages 302–309, 2015 (**IF 3.647**)
18. Rodrigue, H., Cho, S., Han, M. W., **Bhandari, B.**, Shim, J. E. and Ahn, S. H., "Effect of Twist Morphing Wing Segment on Aerodynamic Performance of UAV," Journal of Mechanical Science and Technology, Vol. 30, Issue 1, pp 229-236, 2016 (**IF 1.194**)
19. Rodrigue, H., Wang, W., **Bhandari, B.**, Han, M. W. and Ahn, S. H., "SMA-Based Smart Soft Composite Structure Capable of Multiple Modes of Actuation," Composites Part B: Engineering, Vol. 82, pp 152-158, 2015 (**IF 4.920**)
20. Rodrigue, H., Wang, W., **Bhandari, B.** and Ahn, S.H., "Fabrication of Wrist-like SMA-based Actuator by Double Smart Soft Composite Casting," Smart Materials and Structures, Vol. 24, No. 12, pp 1-10, 2015 (**IF 2.963**)

21. Cannell, J.K., Pokhrel, R., **Bhandari, B.**, "Testing & Development of Pico Hydro Turbines", International Journal on Hydro & Dams, Issue 3, 2005

BOOKS & BOOK CHAPTERS

1. **Bhandari, Binayak**, and Ahn, Sung-Hoon "Off-grid hybrid renewable energy systems and its contribution to Sustainable Development Goals" Hybrid Energy System Models, Elsevier, 2020 (editor Asmae Berrada) (In Proofreading Stage)
2. **Bhandari, Binayak**, "Introduction to railroad engineering: track design, locomotives, and safety", 2019, Woosong University, Korea
3. **Bhandari, Binayak**, "Computer-Aided Design (CAD) CATIA V5 Study Guide for Beginners", 2019, Woosong University Press, Korea
4. **Bhandari, Binayak** and Ahn, Tae-Bong, "The First Course on Railroad Terminology", 2018, Woosong University Press, Korea
5. Song, Chul-Gi, Kim, Jong-Ryal, **Bhandari, Binayak**, Engineering Mathematics with MATLAB"2019, Hanti Media Publication, Korea (In Korean)
6. Ahn, Sung-Hoon and **Bhandari, Binayak**, "Hydro Energy" in Introduction to Appropriate Technology" 2019, Published by Society of Appropriate Technology, Korea (In Korean)

DOMESTICS JOURNALS PUBLICATIONS

1. Park. Gi-Jun, **Bhandari, Binayak**, "Railway Facility Rail-time Intruder Monitoring System using Computer Vision and Deep Learning", Journal of the Korean Society for Railway, 2020, Vol 23, Issue 1, pp. 35-44
2. 안성훈, 이경태, **Bhandari, B.**, 이길용, 이선영 and Chul-Ki Song, 2012, "Formation Strategy of Renewable Energy Sources for High Mountain Off-grid System Considering Sustainability," Journal of the Korean Society for Precision Engineering Vol. 29, No. 9, pp. 958-963.
3. 김민수, **Bhandari, B.**, Bhandari, P., 퍼우텔 시워 라즈, 이경태, 추원식, 김형일, Bhattachan, A., Mogasale, V., 이선영, 안성훈, 2015, "신재생 에너지를 사용한 네팔 고산지역의 백신 저온 유통 체계 구축," Journal of Appropriate Technology, Academic Society for Appropriate Technology (Korea), Vol. 1, No. 1, pp. 79-83
4. **Bhandari, B.**, and Yang, J., 2008 "Numerical Study of Residual Stress-Strain and Fatigue Life of Rolling Contact", KSTLE Conference 47, Korean Society of Tribologist and Lubrication Engineers

INTERNATIONAL CONFERENCE & PRESENTATIONS

1. **Bhandari, Binayak**, Park, Gi-Jun, "Detection of Softness and Hardness of the Objects using Computer Vision and Pressure Sensors", The 7th International Conference on Mechanical, Automotive and Materials Engineering, Melbourne, Australia (December 8-10, 2019)
2. **Bhandari, Binayak**, "Automated Solid Model Generation by Integrating Computer Vision and CAD", International Symposium on Precision Engineering and Sustainable Manufacturing (PRESM2019), Danang, Vietnam
3. Lee, MinKyo., **Bhandari, Binayak**., "Smart Material and Artificial Intelligence Based Robotic Hand for Texture and Object Identification", International Symposium on Precision Engineering and Sustainable Manufacturing" (2018) July 4th-6th, Sapporo, Japan
4. **Bhandari, Binayak**, and Lee, Min-Kyo, "Aerodynamic Braking System in High-Speed Trains for Safety and Eco-Friendliness", International S.M.A.R.T. Startup Competition and Conference in Tanzania, Jan 28 (Sun) – Feb 1 (Thu) 2018, The Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania
5. **Bhandari, Binayak**, Yaroslav Z., Kim, J.S., and Ahn, S.H.," Modeling of net metering using smart meters for off-grid power systems", (2017), International Conference on Engineering Innovation, Seoul National University Graduate School of Engineering Practice, Seoul National University, Seoul, Korea.

6. **Bhandari, Binayak**, and Ahn, T-B., "Building trans-Himalayan railroad: Prospects and Challenges", The 1st Asian Conference on Railway Infrastructure and Transportation (ART 2016), October 21-22, Jeju, Korea
7. Kim, D-M., Lee, M-K, Kang, S-W, Kim, J-S, Yoo, H-S, Lee, S-C, Hong, C-G, Ahn, T-B., and **Bhandari, Binayak**, "A comprehensive review of ancient mountain railways", The 1st Asian Conference on Railway Infrastructure and Transportation (ART 2016), October 21-22, Jeju, Korea
8. Ahn, Christine Heera, and **Bhandari Binayak**, "Design of Interlocking Compressed Earth Brick Machine and Properties of Brick", International Symposium on Green Manufacturing and Applications (ISGMA 2017), June 27 (Tue) - July 1 (Sat), 2017 Hwabaek International Convention Center Center, Gyeongju, Korea
9. Lee, K.T., Chu, W.S., **Bhandari, Binayak**, Bhandari, P., Bhattachan, A., Kim, S.M., Lee, K.I., Poudel, S.R., Kim, M.S., Kim, E.S., Kim, M., Lee, J.Y., Kim, H.I., Kang, H.E., Lee, J.G., Sung, Y.K., Cho, S.H., Fengpei, Y., Lee, C.S., Mogasale, V., Ahn, S.H., et al., 2015, "Construction of Renewable Energy System and Applying to Health Service in Mountainous Area of Nepal," International Symposium on Green Manufacturing and Application (ISGMA 2015), Korean Society of Precision Engineering(KSPE), June 23-27, Shangri-La Hotel, Qingdao, China.
10. Kim, M.S., Kim, H.I., Poudel, S.R., Kim, M., **Bhandari, Binayak**, Lee, K.T., Chu, W.S., Anuj Bhattachan, Ahn, S.H., 2015, "Development of Backpack Type Vaccine Carrier - a Case Study in Nepal," International Symposium on Green Manufacturing and Application (ISGMA 2015), Korean Society of Precision Engineering(KSPE), June 23-27, Shangri-La Hotel, Qingdao, China.
11. **Bhandari, Binayak**, Ahn, S.H., Lee, K.T., 2014, "Implementation of Tri-Hybrid Renewable Energy System (THRES) in Thingan, Nepal," Wind Energy Asia 2014, Asian Development Bank and Korean Wind Energy Industry Association.
12. **Bhandari, Binayak**, Lee, K. T., Lee, C. S., Song, C. K and Ahn, S. H., 2014, "Evaluation of Tri-Hybrid Renewable Energy System (THRES)," International Symposium on Green Manufacturing and Applications (ISGMA 2014) (Busan, Jun 24~28, 2014).
13. **Bhandari, Binayak**, Lee, K.T., Cho, Y.M., Lee, C.S., Song, C.K., and Ahn, S.H, 2013, "Hybridization of Multiple Renewable Power Sources for remote village electrification", International Symposium on Green Manufacturing and Applications (ISGMA 2013), June 25-29, Ohau, Hawaii, USA)
14. **Bhandari, Binayak**, Lee, K. T., Han, M. W., Lee, H. T., Caroline S. Lee, Chul Ki Song, Ramesh K. Maskey and Ahn, S. H., 2012, "Providing electricity: Sustainable electrification in remote villages of Nepal.," International Symposium on Green Manufacturing and Applications (ISGMA 2012).
15. **Bhandari, Binayak**, Hong, Y. S., Yoon, H. S., Lee, J. C., Moon, J. S., David A. Dornfeld, Barbara S. Linke, Yu-Chu Huang, Gyu-Bong Lee, Ahn, S. H., 2011, "Development of micro-drilling burr control chart based on Taguchi methods for PCB drilling," Asian Symposium for Precision Engineering and Nanotechnology (ASPEN) 2011, The Hong Kong Polytechnic University, etc., November 16-18, Hong Kong, (Best Paper Award).
16. **Bhandari, Binayak**, Lee, G. Y., D.S. Choi, J.H. Kim, Ahn, S. H., 2011, "Development of CFRP precision gantry beams for 11th Generation LCD Panel manufacturing," 18th International Conference on composite materials, August 21-26, 2011, Jeju Island, Korea.
17. **Bhandari, Binayak**, Lee, G. Y., Dong-Soo Choi, Jun-Hyun Kim, Ahn, S. H., 2011, "CFRP Gantry Beams for Energy Saving in LCD Manufacturing Motion Stage System," International Symposium on Green Manufacturing and Application 2011, October 6 Thursday- 7 Friday

2011, Hoam Convention Center, Seoul National University, Seoul, Korea.

18. **Bhandari, Binayak**, Lee, G. Y., Lee, K. T., Yoon, H. S., Kim, D. H., Song, S. H., Moon, J. S., Ramesh K. Maskey, Ahn, S. H., 2011, "Off-grid sustainable small-scale Photovoltaic (PV) project in high altitude region of Nepal," Addressing Climate Change For Sustainable Development Through Up-Scaling Renewable Energy Technologies, October 12-14, Kathmandu, Nepal.
19. **Bhandari, Binayak**, Chun, D. M., Kim, M. S., Choi, J. O., Lee, J. C., Y.H. Kim, C. S. Lee, Ahn, S. H., 2011, "Study of process parameters of nanoparticle deposition system (NPDS) by computational fluid dynamics for the fabrication of dye-sensitized solar cells (DSSC)," World Engineers' Convention 2011, Geneva 4-9 September.
20. Lee, K.T., Chu, W.S., **Bhandari, Binayak**, Bhandari, P., Bhattachan, A., Kim, S.M., Lee, K.I., Poudel, S.R., Kim, M.S., Kim, E.S., Kim, M.C., Lee, J.Y., Kim, H.I., Kang, H.E., Lee, J.G., Sung, Y.K., Cho, S.H., Fengpei, Y., Lee, C.S., Mogasale, V., Ahn, S.H., et al., 2015, "Construction of Renewable Energy System and Applying to Health Service in Mountainous Area of Nepal," International Symposium on Green Manufacturing and Application (ISGMA 2015), Korean Society of Precision Engineering(KSPE), June 23-27, Qingdao, China.
21. Kim, M.S., Kim, H.I., Poudel, S.R., Kim, M.C., **Bhandari, Binayak**, Lee, K.T., Chu, W.S., Anuj Bhattachan, Ahn, S.H., 2015, "Development of Backpack Type Vaccine Carrier - a Case Study in Nepal," International Symposium on Green Manufacturing and Application (ISGMA 2015), Korean Society of Precision Engineering(KSPE), June 23-27, Qingdao, China.
22. Lee, G. Y., Chu, W. S., Lee, K. T., **Bhandari, Binayak**, Kim, M. S., Kim, H. S., Park, J. I., Bilegt, E., Lee, J. Y., Yoon, H. S., Park, G.H., Min, K.W., Kang, Y.S., Song, J. H., Song, C.K., C. S. Lee, Ahn, S. H. et al., 2013, "An Optimal Design and Performance Evaluation of Korean Traditional Ondol System in Varying Gorae Geometry Application of Goguryeo Style Jjok Gudeul," International Symposium on Green Manufacturing and Application (ISGMA 2013), Korean Society of Precision Engineering, etc., June 25-29, Ohau, Hawaii, USA.
23. Lee, K. T., **Bhandari, Binayak**, Chu, W. S., Lee, G. Y., Yoon, H. S., Lee, J. Y., Bilegt, E., Park, J. I., Kim, M. S., C. S. Lee, C. K. Song, Ahn, S. H., et al., 2013, "Installation of off-grid hybrid power generation system and smart grid in the remote mountainous village of Nepal," International Symposium on Green Manufacturing and Applications (ISGMA 2013), Korean Society for Precision Engineering (KSPE), June 26-29, Honolulu, Hawaii, USA.
24. Yoon, H. S., **Bhandari, Binayak**, Moon, J. S., Kim, C. S., Gyu-Bong Lee, Kwang Wook Park, Chul-Ki Song, and Ahn, S. H., 2012, "Energy Analysis of Micro-drilling Process used to Manufacture Printed Circuit Boards," 19th CIRP Conference on Life Cycle Engineering (LCE), UC Berkeley, May 23-25, Berkeley, CA, USA.
25. Ahn, S. H., **Bhandari, Binayak**, Lee, G. Y., Lee, K. T., Yoon, H. S., Kim, D. H., Song, S. H., Moon, J. S., Sung-In Kim, Yoon-Ho Kim, Hak-Chan Kim, Sun-Kyung Yu, Won-Jong Eun, Hye-Seung Jeong and Ramesh Maskey, 2011, "Off-grid sustainable small-scale Photovoltaic (PV) project in high altitude region of Nepal," International Conference on Appropriate Technology, December 2, SNU, Seoul, Korea.
26. Yoon, H. S., Hong, Y. S., **Bhandari, Binayak**, Moon, J. S., and Ahn, S. H., 2011, "Energy Saving in Micro-drilling for PCB Manufacturing by Controlling Drilling Conditions," Asian Symposium for Precision Engineering and Nanotechnology (ASPEN) 2011, The Hong Kong Polytechnic University, etc., November 16-18, Hong Kong.
27. Ramesh Maskey, **Bhandari, Binayak**, Lee, G. Y., Lee, K. T., Yoon, H. S., Kim, D. H., Song, S. H., Moon, J. S., Sung-In Kim, Yoon-Ho Kim, Hak-Chan Kim, Sun-Kyung Yu, Won-Jong Eun, Hye-Seung Jeong, and Ahn, S. H., 2011, "Solar Generating System Installation and a Study on the Efficiency Monitoring in High Altitude Village in Nepal," International Symposium

on Green Manufacturing and Applications (ISGMA 2011), Korean Society of Precision Engineering and Manufacturing (KSPE), etc., October 6-7, Seoul National University, Seoul, Korea.

28. Barbara S. Linke, Yoon, H. S., Hong, Y. S., **Bhandari, Binayak**, Moon, J. S., and Ahn, S. H., 2011, "Energy Efficient Drilling for PCB Manufacturing Considering Lead Time," International Symposium on Green Manufacturing and Applications (ISGMA 2011), Korean Society of Precision Engineering and Manufacturing (KSPE), etc., October 6-7, Seoul National University, Seoul, Korea.

DOMESTIC CONFERENCES

1. 박기준, **Bhandari Binayak**, "딥러닝 AI를 이용한 침입자 통제 및 철도 시설 보안 시스템" 2019년도 한국철도학회 추계학술대회 초록집
2. 이경태, 안성훈, 추원식, **Bhandari, Binayak**, Bhandari, P., Bhattachan, A., 김수미, 이강인, 퍼우텔 시위 라즈, 김민수, 김은섭, 김민철, 이장엽, 김형일, 강하은, 이재경, 성연국, 조성현, Yuan Fengpei, 표영준, 강수희, 손연호, 노유한, 송기현, 안희라, 이선영, Mogasale, V., 2015, "네팔 고산지역에서의 신재생 에너지 시스템 구축과 이를 활용한 의료 서비스" 한국정밀공학회 춘계학술대회, 한국정밀공학회, 5월 13~15일, 제주 라마다프라자제주호텔, 제주.
3. 이경태, **Bhandari, Binayak**, 한민우, 이현택, 노민균, 민경옥, 박지훈, 안희진, 장문혁, 배주영, 김병철, 구인욱, 김형섭, 채홍식, 조단이, 한웅재, 박광욱, 정웅기, 송철기, 이선영, 안성훈, 2012, "5 kW 태양전지 발전 시스템을 사용한 대면적 산만 마을의 전력 공급," 한국정밀공학회 2012년도 춘계학술대회, 한국정밀공학회, 5월 31일~ 6월 1일, 라마다프라자제주호텔, 제주.
4. 이길용, **Bhandari, Binayak**, 이경태, 김동현, 윤해성, 문종설, 송성혁, 안성훈, 2011, "네팔 고산지역 태양전지 발전시스템 설치 지원," 한국정밀공학회 2011 추계학술대회, 한국정밀공학회, 10월 26일-28일, 경주교육문화회관, 경주.
5. 이종천, 윤해성, 문종설, **Bhandari, Binayak**, 장규범, 안성훈*, 2011, "마이크로 드릴을 이용한 동박적층판 구멍가공에서의 버 형성과 가속수명시험," 2011년 한국복합재료학회 추계학술대회, 한국복합재료학회, 11월 18일, CECO, 창원.
6. **Bhandari, Binayak**, 이길용, Dong-Soo Choi, Jun-Hyun Kim, 안성훈, 2011, "CFRP composite gantry beams for energy and weight saving," 한국정밀공학회 2011년도 춘계학술대논문집.
7. 윤해성, 홍영선, **Bhandari, Binayak**, 문종설, 안성훈*, 2011, "PCB 가공공정에서 드릴링 가공 조건 변화를 이용한 에너지 절감 전략," 한국기계가공학회 춘계학술대회, 한국기계가공학회, 6월 16~17일, 부경대학교, 부산.
8. 이길용, **Bhandari, Binayak**, 이재철, 김명섭, 최동수, 김준현, 안성훈*, 2010, "정밀 스테이지의 탄소섬유강화플라스틱 갠트리 크로스빔의 설계에 관한 연구," 한국복합재료학회 추계학술대회, 한국복합재료학회, 10월 22일, 100주년 기념관, 서울과학기술대학교, 서울.
9. **Bhandari, Binayak**, and Yang, J., "Numerical Study of Residual Stress-Strain and Fatigue Life of Rolling Contact", KSTLE Conference 47-2008. (Korean Society of Tribologist and Lubrication Engineers)

THESIS

1. **Bhandari, Binayak**, 2014, "Design and Evaluation of Tri-Hybrid Renewable Energy System (THRES)," Ph.D. thesis, Seoul National University.

ARTICLES

1. **Bhandari, Binayak**, "Finite Element Methods and its role in Science and Engineering," Society of Nepalese Students in Korea (SONSIK), SONSIK Journal, Vol. 2
2. **Bhandari, Binayak**, "Smart Materials: Introduction to Shape Memory Alloy, Society of

POSTERS

1. Sang-Bae Yoon, Yong-Tae Cho, Jyung-Hoon Kim, Dong-Hwan Kim, Tae-Bong Ahn, and **Bhandari. Binayak**, "Case studies of Optimization of hybrid renewable energy power system for remote installations", 한국수소 및 신에에너지학회, November 12~13, 2015, Onyang, Korea
2. **Bhandari. Binayak**, Gil Yong Lee, Myung Sub Kim, Jae Chul Lee, Dong-Soo Choi, Jun-Hyun Kim, Sung-Hoon Ahn, "Design & Fabrication of High Stiffness 8th Generation LCD Manufacturing Ultra Precision Stage System", International Research Poster Competition, November 29th, Seoul National University, Seoul, Korea
3. Barbara S. Linke, Hae-Sung Yoon, Young-Sun Hong, **Bhandari. Binayak**, Jong-Seol Moon, Sung-Hoon Ahn, "Energy Efficient Drilling for PCB Manufacturing Considering Lead Time," International Symposium on Green Manufacturing and Application 2011, Hoam Convention Center, Seoul National University, Seoul, Korea October 7, 2011
4. Yu-Chu Huang, Barbara Linke, **Bhandari. Binayak**, Sung-Hoon Ahn, David Dornfeld, "Greening PCB Drilling Process: Burr Minimization and Other Strategies," International Symposium on Green Manufacturing and Application 2011, Hoam Convention Center, Seoul National University, Seoul, Korea October 7, 2011

INVITED SPEAKER / SEMINARS

1. **Bhandari. Binayak**, 2019, "Application of Machine Learning and Computer Vision for Design and Analysis of Mechanical Systems", Mechanical Engineering Seminar, Seoul National University (26th December 2019)
2. **Bhandari. Binayak.**, 2017, " How to write research grant?", Endicott College of International Studies, Woosong University, Daejeon, Korea
3. **Bhandari. Binayak**, 2017, "Engineering: Appropriate technology use and its future perspective", Eco Engineering Academy, Samsung Engineering Headquarter, Seoul, Korea (14th February 2017)
4. **Bhandari. Binayak**, Ahn, S. H., 2012, "Appropriate Technologies in the context of Nepal: An Engineer's Perspective," Good Neighbors International, Appropriate Technology Innovation Camp, July.
5. **Bhandari. Binayak**, Ahn, S. H., 2012, "Appropriate Technologies in the context of Nepal," Society of Nepalese Student in Korea, (SONSIK), 1st Educational Seminar 2012, Nepali Embassy, Seoul, Korea, 26 May 2012.
6. Ahn, S. H., Lee, G. Y., Yan, J., Kim, M. S., **Bhandari. B.**, and Pandey, J. K., 2012, "탄소기반 복합재의 기능성 부여 및 응용," 현대자동차 중앙연구소, 의왕, 4월 9일.
7. **Bhandari. Binayak**, 21st February 2009, "Crack Initiation and Fatigue Life Prediction of the Rolling Contact using Finite Element Methods," Kathmandu University, CEPTE, Kathmandu, Nepal
8. **Bhandari. Binayak**, 21st February 2009, "Design and Analysis of Multi-Joint Assembly Aluminum Alloy Wheel," Kathmandu University, CEPTE, Kathmandu, Nepal

GRADUATE STUDENT SUPERVISION

1. *Wang, Xinlin*, Ph.D., 2019, Thesis title, "Real-time wireless electrical load tracking and anomaly detection of a smart grid using machine learning technology" Seoul National University, Korea
2. *Jang-Yeob Lee*, Ph.D. 2017, Thesis title, "Monitoring of off-grid renewable energy systems and a load oriented model for energy production and consumption" Seoul National University, Korea (Currently working in Samsung Korea)
3. *Wang Wei*, Ph.D. 2016, Thesis title, "Deployable Soft Composite Structures with Morphing and Shape Retention", Seoul National University, Korea (Currently Assistant Professor @ Hanyang University, Seoul, South Korea)

4. *Hugo Rodrigue*, Ph.D. 2015, Thesis title, "Design and Manufacturing of Twisting Soft Composite Actuators with Shape Memory Alloy Wires" Seoul National University, Korea (Currently Assistant Professor @ Sungkyunkwan University, Seoul, South Korea)

ACADEMIC LEADERSHIP

Vice-President of Seoul International Student Forum (2010), recognized by the Seoul Metropolitan Government, Korea

RESEARCH GRANT / FUNDING

Principal Investigator, National Research Foundation, Korea, (2017) under Global Education Support Project, "Development of Artificial Intelligence Based Smart Robots for Haptic Identification of Objects" US\$150 k, (2017-2020)

AWARDS

1. **Bhandari, Binayak**, "**Best Teaching Award, Consolation Award**" for online teaching by President of Woosong University, Daejeon, South Korea 1st June 2020
2. **Bhandari, Binayak**, 2019 "**Excellent oral presentation-** Detection of Softness and hardness of the Objects using computer vision and pressure sensor", CMAME 2019, RMIT, Melbourne, Australia
3. **Bhandari, Binayak**, Lee, K.T., Lee, G.Y., Cho, Y. M., and Ahn, S.H., 2016, "**Most Downloaded Article Award, 2014 to 2015** - Optimization of Hybrid Renewable Energy Power Systems: A Review," International Journal of Precision Engineering and Manufacturing-Green Technology, Vol. 2, No. 1, pp. 99-112, 2015.
4. **Bhandari, Binayak**, Lee, G. Y., Ahn, S. H., 2013, "**IJPEM Most Downloaded Article Award 2012**, "A review on IPMC material and actuators and sensors: fabrication, characterization and applications"," KSPE and Springer, International Journal of Precision Engineering and Manufacturing.
5. **Bhandari, Binayak**, Hong, Y. S., Yoon, H. S., Lee, J. C., Moon, J. S., David A. Dornfeld, Barbara S. Linke, Yu-Chu Huang, Gyu-Bong Lee, Ahn, S. H., 2011, "Best Paper Award", for the poster presentation titled "Development of micro-drilling burr control chart based on Taguchi methods for PCB drilling" Asian Symposium for Precision Engineering and Nanotechnology (ASPEN) 2011, The Hong Kong Polytechnic University, etc., November 17, Hong Kong.
6. **Bhandari, Binayak**, Lee, G. Y., Kim, M. S., Lee, J. C., Dong-Soo Choi, Jun-Hyun Kim, Ahn, S. H., 2010, "**Grand Prize**," Design & Fabrication of High Stiffness 8th Generation LCD Manufacturing Ultra Precision Stage System, International Research Poster Competition, Seoul National University.
7. Lee, G. Y., Lee, K. T., **Bhandari, Binayak**, Chu, W. S., Yoon, H. S., Lee, J. Y., Bilegt, E., Park, J. I., Kim, M. S., Kim, H. S., 민경욱, 강영석, 박지훈, Song, J. H., 유은지, 김민희, 장문혁, 김범호, Maskey, A., 김형섭, 조단이, 최다현, 김동휘, 박철환, 박찬동, 한현석, 심재환, 한성길, 박지환, 조원희, 문준영, 송세용, 신현민, Bhandari, P., Ahn, S. H., C. S. Lee, 송철기, 2013, "국토교통부장관상(대상)," 제5회 소외된 90%를 위한 창의설계 경진대회, 한양대학교, 한밭대학교, 한동대학교, (사)나눔과기술, 5월 24일, 한양대학교 (**Ministry Award**)
8. Seunggyu Jeong, Sangseok Yoon, **Bhandari, Binayak**, and Ahn, S. H., 2012, "Water Vest," 소외된 90%를 위한 창의적 공학설계 경진대회, (**Hanbat University President Award**)
9. **Excellence Award** in the Korean presentation contest, organized by Seoul National University, July 2010
10. **KGSP Ph.D.** scholarship, Korean Government Scholarship Program, 2009-2014
11. **Graduate Scholarship** for Master of Engineering, Myongji University, Korea, 2007-2009
12. Happy House Foundation (HHF) **Research Fellow Award**, Kathmandu University, 2005-2007
13. **Research Assistantship**, Kathmandu University, 2004-2005

EDITORSHIP:

Guest Editor of the Special Issue of International Journal of Precision Engineering and Manufacturing-Green Technology (IJPEM-GT) To be published in 2022, Vol. 9, No. 3.

Member of Editorial Board for *International Journal of Precision Engineering and Manufacturing-Green Technology (IJPEM-GT)* Jan 1, 2017-Till date

CONFERENCE/ COLLOQUIUM/ ADVISORY COMMITTEE

- **Coordinator**, “Sustainable Energy Symposium” of 2nd NRN Global Knowledge Convention (2020) <https://knowledge.nrna.org/committee/>
- **Engineering Session Chair**: International Research Colloquium 2019, June 29, 2019
- **Member of Advisory Committee**: Society of Nepalese Students in Korea (SONSIK), 13th SONSİK Executive Committee
- **Organizing Committee Member**: International Symposium on Green Manufacturing and Applications (ISGMA 2017), Hwabaek International Convention Center, Gyeongju, Korea

PROFESSIONAL MEMBERSHIPS

- The Korean Society of Railway (July 2017 ~ Present)
- Nepal Engineering Council (June 2004 ~ Present)