# Curriculum Vitae


## Weilong (Ben) Cong
Ph.D.

Department of Industrial, Manufacturing,
and systems Engineering,
Texas Tech University, Lubbock, TX-79409, USA
Work: 806-834-6178, Cell: 785-320-3261
Fax: 806-742-3411, weilong.cong@ttu.edu


## EDUCATION

**Ph.D. in Industrial Engineering**

Kansas State University (KSU), Manhattan, KS, USA May 2013

- Dissertation: Drilling of high-performance materials: experimental, numerical, and theoretical investigations. Advisor: Professor Z.J. Pei.

**B.S. in Heat and Power Engineering**

Dalian Ocean University (Formerly Dalian Fisheries University), China July 2007

## WORK EXPERIENCE

**Assistant Professor,** Department of Industrial, Manufacturing, and Systems Engineering
Texas Tech University (TTU), Lubbock, TX 08/2014 – Present

**Research Assistant Professor,** Department of Industrial and Manufacturing Systems Engineering
Kansas State University, Manhattan, KS 01/2014 – 08/2014

**Post-Doctoral Fellow**, Department of Industrial and Manufacturing Systems Engineering
Kansas State University, Manhattan, KS 07/2013 – 12/2013

**Graduate Teaching Assistant**, Department of Industrial and Manufacturing Systems Engineering
Kansas State University, Manhattan, KS 07/2011 – 05/2013

**Graduate Research Assistant**, Department of Industrial and Manufacturing Systems Engineering
Kansas State University, Manhattan, KS 05/2008 – 05/2013

## PUBLICATION SUMMARY AND CITATIONS

- Authored or co-authored 112 published (including accepted) papers, book, and book chapters (64 journal papers, 45 conference papers, 3 book / book chapters)
- 2340 citations with an h-index of 24 according to Google Scholar (as on 01/15/2019).
- 1717 citations with an h-index of 21 according to Scopus (as on 01/15/2019).

## RESEARCH INTERESTS

- Rotary ultrasonic machining of high performance aerospace materials
- Laser additive manufacturing of metal and ceramic based materials
- Ultrasonic vibration-assisted manufacturing processes
- Composite materials fabrication and machining

## GRANT PROPOSALS EXPERIENCES

**Proposals funded / approved**

- NSF CMMI-1538381, "Fundamental Research on Hole Drilling and Surface Grinding of Carbon Fiber Reinforced Plastic Composites with Rotary Ultrasonic Machining", (as the solo PI, funded, 12/2015-11/2018, $316,691).
  - REU Supplement for NSF CMMI-1538381, (as the PI, funded, 03/2016, $9,800).
  - REU Supplement for NSF CMMI-1538381, (as the PI, funded, 06/2018, $7,121).
- DOE, "Clean Energy Manufacturing Innovation Institute (CEMII) for Reducing Embodied-energy and Decreasing Emissions (REMADE) in Material Manufacturing", TTU is one of joint institute, (TTU portion, as the Co-PI, selected by DOE, 01/2017, no direct budget)
- DOD DURIP (Through ARO), "Nano-mechanical testing equipment for laser deposition-additive manufacturing of superior performance nano-structured metal based materials", (as the PI, funded in 07/15/2017-07/14/2018, $186,651).
- NSF DUE-1712311, "Collaborative research: Creating an upper division additive manufacturing course and laboratory for enhancing undergraduate research and innovation", (as the PI, funded in 09/01/2017-08/31/2020, $146,539)

## TEACHING EXPERIENCE

Teaching at Kansas State University, Manhattan, KS 07/2011 – 05/2014

- **IMSE 250**, Introduction to Manufacturing Processes and Systems (sophomore, 2 credit hours).
  - Teaching semesters: Fall 2011, Spring & Fall 2012, Spring & Fall 2013, and Spring 2014.
  - Approximately 160-170 students enrolled each semester.
- **IMSE 602**, Introduction of Renewable Energy Manufacturing (senior level, 3 credit hours).
  - Teaching semester: Spring 2014.
  - 22 students enrolled.

Teaching at Texas Tech University, Lubbock, TX 09/2014 – Present

- **IE 5352**, Advanced Manufacturing Engineering (graduate level, 3 credit hours).
  - Teaching semester: Spring 2015 and Fall 2017.
  - 10 students enrolled (9 on-campus students and 1 distance student) in Spring 2015.
  - 15 students enrolled in Fall 2017
- **IE 5351**, Advanced Manufacturing Processes (graduate level, 3 credit hours).
  - Teaching semester: Fall 2015 and Spring 2017.
  - 30 students enrolled (27 on-campus students and 3 distance students), in Fall 2015.
  - 6 students enrolled in Spring 2017
- **IE 4352**, Manufacturing Engineering II (undergraduate upper level, 3 credit hours).
  - Teaching semester: Spring 2016.
  - 25 students enrolled (on-campus students).
- **IE 3351**, Manufacturing Engineering I (junior level, 3 credit hours).
  - Teaching semester: Fall 2016, Fall 2018.
  - 30 students enrolled (on-campus students).
- **IE 4331**, 3D Printing and Additive Manufacturing (senior level, 3 credit hours).
  - Teaching semester: Spring 2018, Spring 2019.
  - 16 students enrolled (on-campus students).

| Teaching evaluation at TTU | Spring 2015 | Fall 2015 | Spring 2016 | Fall 2016 | Spring 2017 | Fall 2017 | Spring 2018 | Fall 2018 |
|---|---|---|---|---|---|---|---|---|
| 1. Course objectives | 4.14 | 4.81 | 4.53 | 4.48 | 4.3 | 4.5 | 4.9 | 4.7 |
| 2. Overall effectiveness. | 4.00 | 4.59 | 4.20 | 4.39 | 4.2 | 4.6 | 4.7 | 4.5 |
| 3. Valuable learning experience. | 4.43 | 4.26 | 4.36 | 4.44 | 4.0 | 4.4 | 4.7 | 4.5 |

## STUDENTS ADVISING

Fuda Ning, Ph.D. Graduated: 05/2018

- **Research topic**: Ultrasonic vibration-assisted mechanical and thermal manufacturing processes

Yingbin Hu, Ph.D. Candidate, Expected graduation: 08/2019

- **Research topic**: Laser deposition additive manufacturing of ceramic and ceramic reinforced composites

Hui Wang, Ph.D. Candidate, Expected graduation: 12/2019

- **Research topic**: Surfacing and hole making of CFRP composites using rotary ultrasonic machining processes

Zhongzhe Zhang, Xiaoxu Chen, Ph.D. students

## AWARDS at TTU

- SME Outstanding Young Manufacturing Engineering" Award, 2019
- Whitacre Engineering Research Award at TTU, 2017: Faculty award.
- TTU graduate research award ($1000), 2018: Yingbin Hu.
- Graduate Doctoral Dissertation Completion Fellowship ($29 k), 2018: Yingbin Hu.
- Graduate Doctoral Dissertation Completion Fellowship ($29 k), 2017: Fuda Ning.
- Horn Professors Graduate Achievement Award at TTU (five awardees in TTU), 2016: Fuda Ning.
- First Runner-up in NAMRI/SME Outstanding Student Research Presentation Competition, 2017: Fuda Ning.
- Second place in 16th Annual Graduate School Poster Competition at TTU, 2017: Yingbin Hu.
- First place in 15th Annual Graduate School Poster Competition at TTU, 2016: Fuda Ning.
- NSF Student Travel Awards for students
  - For SFF 2017 Symposium in Austin, Texas, 2017: Fuda Ning and Yingbin Hu.
  - For SFF 2016 Symposium in Austin, TX, 2016: Fuda Ning and Yingbin Hu.
  - For ASME-MSEC 2018 Conference in College Station, TX, 2018: Yingbin Hu and Hui Wang.
  - For ASME-MSEC 2017 Conference in Los Angeles, CA, 2017: Yingbin Hu and Hui Wang.
  - For ASME-MSEC 2016 Conference in Blacksburg, VA, 2016: Yingbin Hu and Fuda Ning.
  - For ASME-MSEC 2015 Conference in Charlotte, NC, 2015: Fuda Ning.

## SERVICES AND ACTIVITIES

- Scientific Committee Members for Material Removal track in 47$^{th}$ SME North American Manufacturing Research Conference (NAMRC).
- Symposium organizer of Advances in Assisted and Augmented Manufacturing Processes, in ASME 2019 International Manufacturing Science and Engineering Conference (MSEC).
- Section (Co)Chair in ASME 2015/ 2016 / 2018 International Manufacturing Science and Engineering Conference (MSEC).

- Section (Co)Chair in the 44th SME North American Manufacturing Research Conference (NAMRC).
- Reviewer for more than 20 different journals and conferences.
- American Society of Mechanical Engineers (ASME) member.
- Society of Manufacturing Engineers (SME) member
- Panel reviewer for NSF proposals (2015).
- Advising/advised three Ph.D. students, four visiting scholars, and six REU students.
- TTU IE departmental graduate students' academic advisor (08/2015– Present).
- TTU IE departmental graduate committee member (09/2015– Present).
- TTU IE departmental faculty search committee member (2015–2016).
- TTU IE department chair search committee member (2016–2017).
- TTU IE department strategic planning committee member (09/2015– Present).
- TTU IE department moving committee member (09/2015– 2017).
- TTU IE department scholarship committee member / Chair (09/2014– Present)

## PUBLICATIONS

**Journals and transactions (Peer-reviewed)**

1. Liu, Z.C., Li, T., Ning, F.D., Cong, W.L., Kim, H., Jiang, Q.H., and Zhang, H.C., 2019, "Effects of deposition variables on molten pool temperature during laser engineered net shaping of Inconel 718 superalloy," International Journal of Advanced Manufacturing Technology. DOI: https://doi.org/10.1007/s00170-018-03245-1.
2. Ning, F.D., Hu, Y.B., and Cong, W.L., 2018, "Microstructure and mechanical property of TiB reinforced Ti matrix composites fabricated by ultrasonic vibration-assisted laser engineered net shaping," Rapid Prototyping Journal. DOI: https://doi.org/10.1108/RPJ-05-2018-0118.
3. Li, Y.C., Ge, X., Wang, H., Hu, Y.B., Ning, F.D., Cong, W.L., and Ren, C.Z., 2018, "Study of material removal mechanisms in grinding of C/SiC composites via single-abrasive scratch tests," Ceramics International. DOI: https://doi.org/10.1016/j.ceramint.2018.11.165.
4. Li, Y.C., Ren, C.Z., Wang, H., Hu, Y.B., Ning, F.D., Wang, X.L., and Cong, W.L., 2018, "Edge surface grinding of CFRP composites using rotary ultrasonic machining: comparison of two machining methods," International Journal of Advanced Manufacturing Technology. DOI: https://doi.org/10.1007/s00170-018-2901-1.
5. Hu, Y.B., and Cong, W.L., 2018, "A review on laser deposition-additive manufacturing of ceramics and ceramic reinforced metal matrix composites," Ceramics International. DOI: https://doi.org/10.1016/j.ceramint.2018.08.083.
6. Wang, H., Ning, F.D., Hu, Y.B., Li, Y.C., Wang, X.L., and Cong, W.L., 2018, "Edge trimming of carbon fiber reinforced plastic composites using rotary ultrasonic machining: effects of tool orientations," International Journal of Advanced Manufacturing Technology, Vol. 98, No. 5-8, pp. 1641-1653. DOI: https://doi.org/10.1007/s00170-018-2355-5.
7. Ning, F.D., Hu, Y.B., Liu, Z.C., Wang, X.L., Li, Y.Z., and Cong, W.L., 2018, "Ultrasonic vibration-assisted laser engineered net shaping of Inconel 718 parts: microstructural and mechanical characterization," ASME Trans. Journal of Manufacturing Science and Engineering, Vol. 140, No. 6, pp. 061012-061012-11.
8. Jiang, Q.H., Liu, Z.C., Liu, W.W., Li, T., Cong, W.L., Zhang, H.C., and Shi, J.L., 2018, "A principal component analysis based three-dimensional sustainability assessment model to evaluate corporate sustainable performance," Journal of Cleaner Production, Vol. 187, pp. 625-637. DOI: https://doi.org/10.1016/j.jclepro.2018.03.255.

9. Liu, Z.C., Jiang, Q.H., Ning, F.D., Kim, H., Cong, W.L., Xu, C.X., and Zhang, H.C., 2018, "Investigation of Energy Requirements and Environmental Performance for Additive Manufacturing Processes," Sustainability, Vol. 10, No. 10, pp. 3606(1-15). https://doi.org/10.3390/su10103606.
10. Wang, X.L., Deng, D., Hu, Y.B., Ning, F.D., Wang, H., Cong, W.L., and Zhang, H.C., 2018, "Overhang structure and accuracy in laser engineered net shaping of Fe-Cr steel," Optics and Laser Technology, Vol. 106, pp. 357-365. https://doi.org/10.1016/j.optlastec.2018.04.015.
11. Wang, H., Ning, F.D., Hu, Y.B., and Cong, W.L., 2018, "Surface grinding of CFRP composites using rotary ultrasonic machining: a comparison of workpiece machining orientations," International Journal of Advanced Manufacturing Technology, Vol. 95, No. 5-8, pp. 2917-2930. https://doi.org/10.1007/s00170-017-1401-z.
12. Wang, H., Cong, W.L., Ning, F.D., and Hu, Y.B., 2018, "A study on the effects of machining variables in surface grinding of CFRP composites using rotary ultrasonic machining," The International Journal of Advanced Manufacturing Technology, Vol. 95, No. 9-12, pp. 3651-3663. https://doi.org/10.1007/s00170-017-1468-6
13. Hu, Y.B., Ning, F.D., Cong, W.L., Li, Y.C., Wang, X.L., and Wang, H., 2018, "Ultrasonic vibration-assisted laser engineering net shaping of $ZrO_2$-$Al_2O_3$ bulk parts: Effects on crack suppression, microstructure, and mechanical properties," Ceramics International, Vol. 44, No. 3, pp. 2752-2760.
14. Hu, Y.B., Cong W.L., Wang, X.L., Li, Y.C., Ning, F.D., and Wang, H., 2018, "Laser deposition-additive manufacturing of titanium matrix composites with novel three-dimensional quasi-continuous network microstructure: Effects on strengthening and toughening," Composites Part B: Engineering, Vol. 133, pp. 91-100.
15. Hu, Y.B., Ning, F.D., Wang, H., Cong, W.L., and Zhao, B., 2018, "Laser engineered net shaping of quasi-continuous network microstructural TiB reinforced titanium matrix bulk composites: microstructure and wear performance," Optics & Laser Technology, Vol. 99, pp. 174-183.
16. Wang, H., Ning, F.D., Hu, Y.B., Du, D.P., and Cong, W.L., 2017, "Surface grinding of CFRP composites using rotary ultrasonic machining: design of experiment on cutting force, torque, and surface roughness," International Journal of Manufacturing Research, Vol. 12, No. 4, pp. 461-479.
17. Fernando, P.K.S.C., Zhang, M., Pei, Z.J., and Cong, W.L., 2017, "Intermittent and Continuous Rotary Ultrasonic Machining of K9 Glass," Journal of Manufacturing and Materials Processing, Vol. 1, No. 2, pp. 20(1-11). DOI: https://doi.org/10.3390/jmmp1020020.
18. Liu Z.C., Jiang Q.H., Cong, W.L., and Zhang, H.C., 2017, "Comparative study for environmental performances of traditional manufacturing and directed energy deposition processes," International Journal of Environmental Science and Technology, Vol. 15 No. 11, pp. 2273-2282. DOI: https://doi.org/10.1007/s13762-017-1622-6.
19. Hu, Y.B., Ning, F.D., Wang, X.L., Wang, H., Zhao, B., Cong, W.L., and Li, Y.Z., 2017, "Laser deposition-additive manufacturing of in-situ TiB reinforced titanium matrix composites: TiB growth and part performance," The International Journal of Advanced Manufacturing Technology, Vol. 93, No. 9-12, pp. 3409-3418.
20. Kim H., Liu Z.C., Cong, W.L., and Zhang H.C., 2017, "Tensile fracture behavior and failure mechanism of additively-manufactured AISI 4140 low alloy steel by laser engineered net shaping," Materials, Vol. 10, No. 11, pp. (1283)1-15.
21. Cong, W.L., and Ning, F.D., 2017, "A fundamental investigation on ultrasonic vibration-assisted laser engineered net shaping process," International Journal of Machine Tools and Manufacture, Vol 121, pp. 61-69.
22. Kim H., Cong, W.L., Zhang H.C., and Liu Z.C., 2017, "Laser engineered net shaping of nickel-based superalloy Inconel 718 powders onto AISI 4140 alloy steel substrates: Interface Bond and Fracture Failure Mechanism," Materials, Vol. 10, No. 4, pp. (341)1-18.
23. Li, Y.Z., Cong, W.L., Hu, Y.B., Zhi, L., and Guo, Z.N., 2017, "Additive manufacturing of alumina using laser engineered net shaping: effects of deposition variables," Ceramics International, Vol. 43, No. 10, pp. 7768-7775.
24. Ning, F.D., Cong, W.L., Wang, H., Hu, Y.B., Hu, Z.L., and Pei, Z.J., 2017, "Surface grinding of CFRP

composites with rotary ultrasonic machining: a mechanistic model on cutting force in the feed direction," International Journal of Advanced Manufacturing Technology, Vol. 192, No. 1-4, pp. 1217-1229.
25. Ning, F.D., Wang, H., Cong, W.L., and Fernando, P.K.S.C., 2017, "A mechanistic ultrasonic vibration amplitude model during rotary ultrasonic machining of CFRP composites," Ultrasonics, Vol. 76, pp. 44-51.
26. Ning, F.D., Cong, W.L., Hu, Z.L., and Huang, K., 2017, "Additive manufacturing of thermoplastic matrix composites using fused deposition modeling: A comparison of two reinforcements," Journal of Composite Materials, Vol. 51, No. 27, pp. 3733-3742.
27. Hu, Y.B., Zhao, B., Ning, F.D., Wang, H., and Cong, W.L., 2017, "In-situ ultrafine three-dimensional quasi-continuous network microstructural TiB reinforced titanium matrix composites fabrication using laser engineered net shaping," Materials Letters, Vol. 195, pp. 116-119.
28. Liu, Z.C., Ning, F.D., Cong, W.L., Jiang, Q.H., Zhang, H.C., and Zhou, Y.G., 2016, "Energy consumption and saving analysis for laser engineered net shaping of metal powders," Energies, Vol. 9, No. 10, pp. 763-774.
29. Ning, F.D. and Cong, W.L., 2016, "Microstructures and mechanical properties of Fe-Cr stainless steel parts fabricated by ultrasonic vibration-assisted laser engineered net shaping process," Materials Letters, Vol. 179, pp. 61-64.
30. Ning, F.D., Cong, W.L., Pei, Z.J., and Treadwell, C., 2016, "Rotary ultrasonic machining of CFRP: A comparison with grinding," Ultrasonics, Vol. 66, pp. 125-132.
31. Ning, F.D., Cong, W.L., Hu, Y.B., and Wang, H., 2016, "Additive manufacturing of CFRP composites using fused deposition modeling: Effects of process parameters on tensile properties," Journal of Composite Materials, Vol. 51, No. 4, pp. 451–462. DOI: 10.1177/0021998316646169.
32. Xu, M.S., Jiang, J.B., Li, B.B., Cong, W.L., and Zhang D.D., 2016, "Experimental characterizations of laser cladding of iron- and nickel-based alloy powders on carbon steel 1045 for remanufacturing," Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, DOI: 10.1177/1464420716660126.
33. Wang, H., Ning, F.D., Hu, Y.B., Fernando, P.K.S.C., Pei, Z.J., and Cong, W.L., 2016, "Surface grinding of CFRP composites using rotary ultrasonic machining: effects of tool variables," Advances in Mechanical Engineering, Vol. 8, No. 9, pp. 1-14. DOI: https://doi.org/10.1177/1687814016670284.
34. Li, Y.Z., Ning, F.D., Cong, W.L., Zhang, M., and Tang, Y.J., 2016, "Investigating pellet charring and temperature in ultrasonic vibration-assisted pelleting of wheat straw for cellulosic biofuel manufacturing," Renewable Energy, Vol. 92, pp. 312-320.
35. Ning, F.D., Cong, W.L., Qiu, J.J., Wei, J.H., and Wang, S.R., 2015, "Additive manufacturing of carbon fiber reinforced thermoplastic composites using fused deposition modeling," Composite Part B: Engineering, Vol. 80, October, pp. 369-378.
36. Tang, Y.J., Cong, W.L., Xu, J., Zhang, P.F., and Liu, D.F., 2015, "Ultrasonic vibration-assisted pelleting for cellulosic biofuels manufacturing: A study on in-pellet temperatures," Renewable Energy, Vol. 76, No. 4, pp. 296-302. *corresponding author*
37. Wei, J.H., Wang, J.L., Su, S.H., Wang, S.R., Qiu, J.J., Zhang, Z.H., Christopher, G., Ning, F.D., and Cong, W.L., 2015, "3D printing of an extremely tough hydrogel," RSC Advances, Vol. 5, No. 99, pp. 81324-81329.
38. Cong, W.L., Pei, Z.J., Deines, T.W., Liu, D.F., and Treadwell, C., 2014, "Preliminary study on rotary ultrasonic machining of CFRP/Ti stacks," Ultrasonics, Vol. 54, No. 6, pp. 1594-1602.
39. Cong, W.L., Pei, Z.J., Sun, X., and Zhang, C.L., 2014, "Rotary ultrasonic machining of CFRP: a mechanistic predictive model for cutting force," Ultrasonics, Vol. 52, No. 2, pp. 663-675.
40. Cong, W.L., Pei, Z.J., Deines, T.W., Zhang, P.F., and Treadwell, C., 2013, "Surface roughness in rotary ultrasonic machining: hypotheses and their testing via experiments and simulations," Journal of Manufacturing Research, Vol. 8, No. 4, pp. 378-393.
41. Cong, W.L., Pei, Z.J., Deines, T.W., Liu, D.F., and Treadwell, C., 2013, "Rotary ultrasonic machining of CFRP/Ti stacks using variable feedrate," Composites Part B, Vol. 52, pp. 303-310.
42. Zhang, C.L., Feng, P.F., Pei, Z.J., and Cong, W.L., 2013, "Rotary ultrasonic machining of sapphire:

feasibility study and designed experiments," Key Engineering Materials, Vol. 589, pp. 523-528.
43. Zhang, C.L., Cong, W.L., Feng, P.F., and Pei, Z.J., 2013, "Rotary ultrasonic machining of optical K9 glass using compressed air as coolant: a feasibility study," Journal of Engineering Manufacture (Proceedings of the Institution of Mechanical Engineers), Vol. 228, No. 4, pp. 504-514.
44. Zou, X.T., Cong, W.L., Wu, N., Tian, Y., Wang, H.F., Pei, Z.J., and Wang, X.W., 2013, "Cutting temperature in rotary ultrasonic machining of titanium: experimental study using novel Fabry-Perot fiber optic sensors," International Journal of Manufacturing Research, Vol. 8, No. 3, pp. 250-261.
45. Cong, W.L., Zou, X.T., Deines, T.W., Wu, N., Wang, X.W., and Pei, Z.J., 2012, "Rotary ultrasonic machining of CFRP composites: an experimental study on cutting temperature," Journal of Reinforced Plastics and Composite, Vol. 31, No. 22, pp. 1516-1525.
46. Cong, W.L., Pei, Z.J., Deines, T.W., Srivastava, A., Riley, L., and Treadwell, C., 2012, "Rotary ultrasonic machining of CFRP composites: a study on power consumption," Ultrasonics, Vol. 52, No. 8, pp. 1030-1037. http://dx.doi.org/10.1016/j.bbr.2011.03.031.
47. Cong, W.L., Pei, Z.J., Feng, Q., Deines, T.W., and Treadwell, C., 2012, "Rotary ultrasonic machining of CFRP: a comparison with twist drilling," Journal of Reinforced Plastics and Composite, Vol. 31, No. 5, pp. 313-321.
48. Cong, W.L., Feng, Q., Pei, Z.J., Deines, T.W., and Treadwell, C., 2012, "Edge chipping in rotary ultrasonic machining of silicon," International Journal of Manufacturing Research, Vol. 7, No. 3, pp. 311-329.
49. Cong, W.L., Feng, Q., Pei, Z.J., Deines, T.W., and Treadwell, C., 2012, "Rotary ultrasonic machining of carbon fiber reinforced plastic composites: using cutting fluid versus cold air as coolant," Journal of Composite Materials, Vol. 46, No. 14, pp. 1745-1753.
50. Tang, Y.J., Zhang, P.F., Liu, D.F., Pei, Z.J., and Cong, W.L., 2012, "Ultrasonic vibration-assisted pelleting of cellulosic biomass for biofuel manufacturing: a study on pellet cracks," Journal of Manufacturing Science and Engineering, Vol. 134, No. 5, pp. 051016 (8 pages).
51. Ahmed, Y., Cong, W.L., Stanco, M.R., Xu, Z.G., Pei, Z.J., Treadwell, C., Zhu, Y.L., and Li, Z.C., 2012, "Rotary ultrasonic machining of alumina dental ceramics: a preliminary experimental study on surface and subsurface damages," Journal of Manufacturing Science and Engineering, Vol. 134, No. 6, pp. 064501 (5 pages).
52. Feng, Q., Cong, W.L., Pei, Z.J., and Ren, C.Z., 2012, "Rotary ultrasonic machining of carbon fiber reinforced polymer: feasibility study," Machining Science and Technology, Vol. 16, No. 3, pp. 380-398.
53. Liu, D.F., Cong, W.L., Pei, Z.J., and Tang, Y.J., 2012, "A cutting force model for rotary ultrasonic machining of brittle materials," International Journal of Machine Tools and Manufacture, Vol. 52, No. 1, pp. 77-84.
54. Liu, D.F., Tang, Y.J., and Cong, W.L., 2012, "A review of mechanical drilling for composite laminates," Composite Structures, Vol. 94, No. 4, pp. 1265-1279.
55. Wu, J.Q., Cong, W.L., Williams, R.E., and Pei, Z.J., 2011, "Dynamic process modeling for rotary ultrasonic machining of alumina," Journal of Manufacturing Science and Engineering, Vol. 133, No. 4, pp. 041012-1 – 041012-5.
56. Cong, W.L., Pei, Z.J., Deines, T.W., and Treadwell, C., 2011, "Rotary ultrasonic machining of CFRP using cold air as coolant: feasible regions," Journal of Reinforced Plastics and Composites, Vol. 30, No. 10, pp. 899-906.
57. Cong, W.L., Pei, Z.J., Mohan1ty, N., Van Vleet, E., and Treadwell, C., 2011, "Vibration amplitude in rotary ultrasonic machining: a novel measurement method and effects of process variables," Journal of Manufacturing Science and Engineering, Vol. 133, No. 3, pp. 034501-1– 034501-6.
58. Cong, W.L., Pei, Z.J., Zhang, P.F., Qin, N., Deines, T.W., and Lin, B., 2011, "Ultrasonic-vibration-assisted pelleting of switchgrass: effects of ultrasonic vibration," Transactions of Tianjin University, Vol. 17, No. 5, pp. 313-319.
59. Zhang, P.F., Pei, Z.J., Wang, D.H., Wu, X.R., Cong, W.L., Zhang, M., and Deines, T.W., 2011, "Ultrasonic vibration-assisted pelleting of cellulosic biomass for biofuel manufacturing," Journal of Manufacturing Science and Engineering, Vol. 133, No. 1, pp. 011012-1 – 011012-7.

60. Feng, Q., Cong, W.L., Zhang, M., Pei, Z.J., and Ren, C.Z., 2011, "An experimental study on charring of cellulosic biomass in ultrasonic vibration-assisted pelleting," International Journal of Manufacturing Research, Vol. 6, No. 1, pp. 77-86.
61. Cong, W.L., Pei, Z.J., Deines, T.W., Wang, Q.G., and Treadwell, C., 2010, "Rotary ultrasonic machining of stainless steels: empirical study of machining variables," International Journal of Manufacturing Research, Vol. 5, No. 3, pp. 370-386.
62. Cong, W.L., Zhang, P.F., and Pei, Z.J., 2009, "Experimental investigations on material removal rate and surface roughness in lapping of substrate wafers: a literature review," Key Engineering Materials, Vol. 404, pp. 23-31.
63. Cong, W.L., Pei, Z.J., Churi, N.J., and Wang, Q.G., 2009, "Rotary ultrasonic machining of stainless steel: design of experiments," Transactions of the North American Manufacturing Research Institution of SME, Vol. 37, pp. 261–268.
64. Wang, Q.G., Cong, W.L., Pei, Z.J., Gao, H., and Kang, R.K., 2009, "Rotary ultrasonic machining of potassium dihydrogen phosphate (KDP) crystal: an experimental investigation on surface roughness," Journal of Manufacturing Processes, Vol. 11, No. 2, pp. 66-73.

**Peer-reviewed conference Proceedings**

65. Maloney, P., Li, B.B., Zhang, M., Cong, W.L., 2018, "Creating and assessing an upper division additive manufacturing course and laboratory to enhance undergraduate research and innovation," 2018 ASEE Annual Conference and Exposition, June 24-27, 2018, Salt Lake City, UT, USA.
66. Liu, Z.C., Wang, X.L., Zhou, Y.G., Kim, H., Cong, W.L., and Zhang, H.C., 2018, "Investigations of Energy Density Effects on Forming Accuracy and Mechanical Properties of Inconel 718 Fabricated by LENS Process," 45th SME North American Manufacturing Research Conference (NAMRC45), College Station, TX, USA.
67. Wang, H., Ning, F.D., Hu, Y.B., Li, Y.C., Wang, X.L., and Cong, W.L., 2018, "Edge trimming of CFRP composites using rotary ultrasonic machining: effects of ultrasonic vibration," Proceedings of the ASME 2018 International Manufacturing Science and Engineering Conference (MSEC2018-6362), June 18-22, 2018, College Station, TX, USA.
68. Hu, Y.B., Wang, H., Li, Y. C., Ning, F.D., and Cong, W.L., 2018, "Surface grinding of ZTA parts fabricated by laser engineered net shaping process: effects of $ZrO_2$ content and ultrasonic vibration," Proceedings of the ASME 2018 International Manufacturing Science and Engineering Conference (MSEC2018-6663), June 18-22, 2018, College Station, TX, USA.
69. Hu, Y.B., Maharubin, S., Cong, W.L., and Tan, Z., 2018, "Laser engineered net shaping of titanium-silver alloy for orthopedic implant," Proceedings of the ASME 2018 International Manufacturing Science and Engineering Conference (MSEC2018-6611), June 18-22, 2018, College Station, TX, USA.
70. Ning, F.D., Hu, Y.B., Liu, Z.C., Cong, W.L., Li, Y.Z., and Wang, X.L., 2017, "Ultrasonic vibration-assisted laser engineered net shaping of Inconel 718 parts: a feasibility study," 45th SME North American Manufacturing Research Conference (NAMRC45), June 4-8, 2017, Los Angeles, CA, USA.
71. Ning, F.D., Wang, H., Hu, Y.B., Cong, W.L., Zhang, M., and Li, Y.Z., 2017, "Rotary ultrasonic surface machining of CFRP composites: a comparison with conventional surface grinding," 45th SME North American Manufacturing Research Conference (NAMRC45), June 4-8, 2017, Los Angeles, CA, USA.
72. Liu, Z.C., Cong, W.L., Kim, H., Ning, F.D., Jiang, Q.H., Li, T., Zhang, H.C., and Zhou, Y.G., 2017, "Feasibility exploration of superalloys for AISI 4140 steel repair using laser engineered net shaping," 45th SME North American Manufacturing Research Conference (NAMRC45), June 4-8, 2017, Los Angeles, CA, USA.
73. Hu, Y.B., Wang, H., Ning, F.D., Cong, W.L., and Li, Y.Z., 2017, "Surface grinding of optical BK7/K9 glass using rotary ultrasonic machining: an experimental study," Proceedings of the ASME 2017 International Manufacturing Science and Engineering Conference (MSEC2017-2780), June 4-8, 2017, Los Angeles, CA, USA.
74. Wang, H., Hu, Y.B., Ning, F.D., Li, Y.Z., Zhang, M., Cong, W.L., and Smallwood, S., 2017, "Surface grinding of CFRP composites using rotary ultrasonic machining: effects of ultrasonic power," Proceedings of the ASME 2017 International Manufacturing Science and Engineering Conference

(MSEC2017-2726), June 4-8, 2017, Los Angeles, CA, USA.

75. Fernando, P., Zhang, M., Pei, Z.J., and Cong, W.L., 2017, "Rotary ultrasonic machining: effects of tool end angle on delamination of CFRP drilling," Proceedings of the ASME 2017 International Manufacturing Science and Engineering Conference (MSEC2017-2863), June 4-8, 2017, Los Angeles, CA, USA.
76. Liu, Z.C., Ning, F.D., Cong, W.L., and Zhang, H.C., 2016, "Laser engineering net shaping (LENS) of metal powders: A study on energy consumption," 2016 Annual International Solid Freeform Fabrication (SFF2016) Symposium, August 8-10, Austin, Texas, USA.
77. Ning, F.D., Cong, W.L., Jia, Z.Y., Wang, F.J., and Zhang, M., 2016, "Additive manufacturing of CFRP composites using fused deposition modeling: effects of process parameters," Proceedings of the ASME 2016 International Manufacturing Science and Engineering Conference (MSEC2016-8561), June 27 - July 01, 2016, Blacksburg, VA, USA.
78. Hu, Y.B., Wang, H., Ning, F.D., and Cong, W.L., 2016, "Laser engineered net shaping of commercially pure titanium: effects of fabricating variables," Proceedings of the ASME 2016 International Manufacturing Science and Engineering Conference (MSEC2016-8812), June 27 - July 01, 2016, Blacksburg, VA, USA.
79. Li, Y.Z., Cong, W.L., Huang, R.X., and Ning, F.D., 2016, "Laser cladding of alumina material coating: effects on deposition quality," Proceedings of the ASME 2016 International Manufacturing Science and Engineering Conference (MSEC2016-8814), June 27 - July 01, 2016, Blacksburg, VA, USA.
80. Zhang, M., Song, X.X., Grove, W., Hull, E., Pei, Z.J., Ning, F.D., and Cong, W.L., 2016, "Carbon nanotube reinforced fused deposition modeling using microwave irradiation," Proceedings of the ASME 2016 International Manufacturing Science and Engineering Conference (MSEC2016-8790), June 27 - July 01, 2016 Blacksburg, VA, USA.
81. Kumar, M.N., Jin, X., and Cong, W.L., 2016, "Vibration assisted grinding of additively manufactured stainless steel," the 11th International Conference on Micro Manufacturing, March 29-31, 2016, Orange County, CA, USA.
82. Ning, F.D., and Cong, W.L., 2015, "Rotary ultrasonic machining of CFRP: design of experiments," Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference (MSEC2015-9227), June 8-12, 2015, Charlotte, NC, USA.
83. Ning, F.D., Cong, W.L., Wei, J.H., Wang, S.R., and Zhang, M., 2015, "Additive manufacturing of CFRP composites using fused deposition modeling: effects of carbon fiber content and length," Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference (MSEC 2015-9436), June 8-12, 2015, Charlotte, NC, USA.
84. Hull, E., Grove, W., Zhang, M., Song X.X., Pei, Z.J., and Cong W.L., 2015, "Effects of process variables on extrusion of carbon fiber reinforced ABS filament for additive manufacturing," Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference (MSEC2015-9396), June 8-12, 2015, Charlotte, NC, USA.
85. Fernando, P., Pei, Z.J., Zhang M., Song X.X., and Cong W.L., 2015, "Rotary ultrasonic machining of carbon fiber reinforced plastics: a design of experiment," Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference (MSEC2015-9391), June 8-12, 2015, Charlotte, NC, USA.
86. Zou, X.T., Cong, W.L., Wu, N., Pei, Z.J., and Wang, X.W., 2012, "Novel fiber optic sensors and their application on cutting temperature measurement in rotary ultrasonic machining of titanium," ASME/ISCIE 2012 International Symposium on Flexible Automation (ISFA2012-7142), June 18-20, 2012, St. Louis, MO, USA.
87. Cong, W.L., Feng, Q., Pei, Z.J., Deines, T.W., and Treadwell, C., 2011, "Experimental study on cutting temperature in rotary ultrasonic machining," Proceedings of the 39th SME North American Manufacturing Research Conference (NAMRC Vol. 39, pp. 369-376), June 13-17, 2011, Corvallis, OR, USA.
88. Cong, W.L., Feng, Q., Pei, Z.J., Deines, T.W., and Treadwell, C., 2011, "Dry machining of carbon fiber reinforced plastic composite by rotary ultrasonic machining: effects of machining variables," Proceedings of the ASME 2011 International Manufacturing Science and Engineering Conference

(MSEC2011-50116), June 13-17, 2011, Corvallis, OR, USA.

89. Cong, W.L., and Pei, Z.J., 2011, "Survey of courses on renewable energy manufacturing at American universities," Proceedings of the ASME 2011 International Manufacturing Science and Engineering Conference (MSEC2011-50080), June 13-17, 2011, Corvallis, OR, USA.
90. Qin, N., Pei, Z.J., Cong, W.L., Treadwell, C., and Guo, D.M., 2011, "Ultrasonic vibration-assisted grinding of brittle materials: a mechanistic model for cutting force," Proceedings of the ASME 2011 International Manufacturing Science and Engineering Conference (MSEC2011-50055), June 13-17, 2011, Corvallis, OR, USA.
91. Cong, W.L., Feng, Q., and Pei, Z.J., 2010, "Drilling of silicon based solar panels: a review," Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference (MSEC 2010-34324), October 12-15, 2010, Erie, PA, USA.
92. Cong, W.L., Feng, Q., Pei, Z.J., and Treadwell, C., 2010, "Comparison of superabrasive tools in rotary ultrasonic machining of stainless steel," Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference (MSEC2010-34154), October 12-15, 2010, Erie, PA, USA.
93. Feng, Q., Cong, W.L., Zhang, M., Pei, Z.J., and Ren, C.Z., 2010, "An experimental study on temperature in ultrasonic vibration-assisted pelleting of cellulosic biomass," Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference (MSEC2010-34148), October 12-15, 2010, Erie, PA, USA.
94. Qin, N., Pei, Z.J., Cong, W.L., and Guo, D.M., 2010, "Effects of tool design on edge chipping in ultrasonic-vibration-assisted grinding," Proceedings of the ASME 2010 International Manufacturing Science and Engineering Conference (MSEC2010-34182), October 12-15, 2010, Erie, PA, USA.
95. Zhang, P.F., Deines, T.W., Cong, W.L., Qin, N., Pei, Z.J., and Nottingham, D., 2010, "Ultrasonic vibration-assisted pelleting of switchgrass: effects of moisture content on pellet density, spring-back, and durability," Proceedings of the 20th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM 2010), July 12-14, 2010, California State University, CA, USA.
96. Zhang, M., Song, X.X., Deines, T.W., Zhang, P.F., Zhang, Q., Cong, W.L., Qin, N., and Pei, Z.J., 2010, "Ultrasonic-vibration-assisted pelleting of switchgrass: effects of binder material," Proceedings of the IIE Annual Conference and Expo 2010, June 5-9, 2010, Cancun, Mexico.
97. Qin, N., Pei, Z.J., Cong, W.L., and Guo, D.M., 2010, "UVAG of brittle materials: DOE with a cutting force model," Proceedings of the IIE Annual Conference and Expo 2010, June 5-9, 2010, Cancun, Mexico.
98. Li, Z.C., Stanco, M.R., Cong, W.L., Pei, Z.J., Xu, Z.G., and Treadwell, C., 2010, "Rotary ultrasonic machining of dental ceramics: a preliminary study on subsurface cracks," Proceedings of the ASME 2010 Design of Medical Devices Conference (DMD2010), April 13-15, 2010, Minneapolis, MN, USA.
99. Wu, J.Q., Cong, W.L., Williams, R.E., and Pei, Z.J., 2009, "Stochastic modeling and analysis of rotary ultrasonic machining," Proceedings of the ASME 2009 International Manufacturing Science and Engineering Conference (MSEC 2009-84037), October 4-7, 2009, West Lafayette, IN, USA.
100. Cong, W.L., Pei, Z.J., and Zhang, P.F., 2009, "Experimental investigations on flatness and subsurface damage in lapping of substrate wafers: a literature review," Proceedings of 2009 International Manufacturing Science and Engineering Conference (MSEC2009-84068), October 4-7, 2009, West Lafayette, IN, USA.
101. Cong, W.L., Pei, Z.J., Van Vleet, E., and Wang, Q.G., 2009, "Surface roughness in rotary ultrasonic machining of stainless steels," Proceedings of the IIE Annual Conference and Expo 2009 – Innovations Revealed, May 30 - June 3, 2009, Miami, FL, USA.
102. Cong, W.L., and Pei, Z.J., 2008, "Dry machining using vortex-tube generated cold air as coolant: a literature review," Proceedings of the ASME 2008 International Manufacturing Science and Engineering Conference (MSEC_ICMP2008-72469), October 7-10, 2008, Evanston, IL, USA.

**Conference (Non peer-reviewed)**

103. Hu, Y.B., Wang, H., Ning, F.D., and Cong, W.L., 2016, "Compressive property comparisons between laser engineered net shaping of in situ TiB-Ti composites and CP-Ti materials," 2016 Annual International Solid Freeform Fabrication Symposium, August 8 – 10, Austin, TX, USA.

104. Ning, F.D., Hu, Y.B., Liu, Z.C., and Cong, W.L., 2016, "Microstructural and mechanical performance of $Al_2O_3$ nanoparticle reinforced 17-4 PH stainless steel bulk composite parts fabricated by laser engineered net shaping process," 2016 Annual International Solid Freeform Fabrication Symposium, August 8-10, Austin, TX, USA.
105. Cong, W.L., Deines, T.W., Feng, Q., Zhang, P.F., Qin, N., and Pei, Z.J., 2011, "Fundamental Research on Titanium drilling with rotary ultrasonic machining: 2010 progress report," CD-ROM Proceedings of 2011 NSF CMMI Research and Innovation Conference, January 4-7, 2011, Atlanta, GA.
106. Zhang, P.F., Zhang, M., Song, X.X., Zhang, Q., Cong, W.L., Qin, N., Pei, Z.J., Deines, T.W., and Wang, D.H., 2011, "Ultrasonic vibration-assisted pelleting of cellulosic biomass for biofuel manufacturing," CD-ROM Proceedings of 2011 NSF CMMI Research and Innovation Conference, January 4-7, 2010, Atlanta, GA, USA.
107. Qin, N., Cong, W.L., Zhang, P.F., and Pei, Z.J., 2011, "Fundamental research on silicon wafer fine grinding: 2010 progress report," CD-ROM Proceedings of 2011 NSF CMMI Research and Innovation Conference, January 4-7, 2010, Atlanta, GA, USA.
108. Zou, X.T., Guthy, C., Cong, W.L., Pei, Z.J., and Wang, X.W., 2011, "Cutting temperature distribution in rotary ultrasonic machining of titanium alloy: Finite element analysis and experimental design using an optical temperature sensor array," CD-ROM Proceedings of 2011 NSF CMMI Research and Innovation Conference, Atlanta, GA, January 4-7, 2010, USA.
109. Zhang, P.F., Li, Z.C., Cong, W.L., and Pei, Z.J., 2009, "Fundamental research on silicon wafer fine grinding: 2008 progress report," CD-ROM Proceedings of 2009 NSF Civil, Mechanical and Manufacturing Innovation Grantees and Research Conference, June 22-25, 2009, Honolulu, HI, USA.

**Book / Book chapters (invited)**

110. Cong, W.L., Zhang, M., Song, X.X., Kramer, B.A., Deines, T.W., Pei, Z.J., Emrani, J., Li, Z.C., Stuart, J., and Sun, W.P., 2016, "Introduction to Renewable Energy Manufacturing", ISBN 9781483449982, Lulu Press Inc., Morrisville, NC, USA.
111. Cong W.L., and Ning, F.D., 2015, "Rotary Ultrasonic Machining of CFRP Composites," Chapter 2 in the book of "Machinability of Fiber-Reinforced Plastics", De Gruyter GmbH, Berlin, Germany.
112. Cong, W.L., and Pei, Z.J., 2013, "Process of Ultrasonic Machining," in the book of Springer Reference Series "Handbook of Manufacturing Engineering Technology", DOI: https://doi.org/10.1007/978-1-4471-4976-7_76-1, Springer Inc., Berlin, Heidelberg, Germany.

**Posters**

113. Wang, H., Ning, F.D., Hu, Y.B., Li, Y.C., and Cong, W.L., 2018, "Edge trimming of CFRP composites using rotary ultrasonic machining: effects of ultrasonic vibration," Proceedings of the ASME 2018 International Manufacturing Science and Engineering Conference (MSEC2018-6732 Poster), June 18-22, 2018, College Station, TX, USA.
114. Hu, Y.B., Wang, H., Li, Y.C., Ning, F.D., Cong, W.L., and Beskow, K., 2018, "Surface grinding of ZTA parts fabricated by laser engineered net shaping process: effects of ZrO2 content and ultrasonic vibration," Proceedings of the 2018 Manufacturing Science and Engineering Conference (MSEC2018-6741 Poster), June 18-22, 2018, College Station, TX, USA.
115. Wang, H., Hu, Y.B., Ning, F.D., Cong, W.L., and Smallwood, S., 2017, "Surface grinding of CFRP composites using rotary ultrasonic machining: effects of ultrasonic power," Proceedings of the ASME 2017 International Manufacturing Science and Engineering Conference (MSEC2017-3111 Poster), June 4-8, 2017, Los Angeles, CA, USA.
116. Hu, Y.B., Wang, H., Ning, F.D., Cong, W.L., and Ericson, H., 2017, "Surface grinding of optical BK7/K9 glass using rotary ultrasonic machining: an experimental study," Proceedings of the ASME 2017 International Manufacturing Science and Engineering Conference (MSEC2017-3110 Poster), June 4-8, 2017, Los Angeles, CA, USA.
117. Ning, F.D., Wang, H., Hu, Y.B., and Cong, W.L., 2016, "A parametric study of tensile properties of CFRP composite parts fabricated by fused deposition modeling," Poster presentation at the 2016

Annual International Solid Freeform Fabrication (SFF2016) Symposium, August 8-10, Austin, TX, USA.

118. Hu, Y.B., Ning, F.D., Wang, H., and Cong, W.L., 2016, "Laser engineered net shaping of in situ TiB-Ti metal matrix bulk composites: microstructure evolution and mechanical behavior," Poster presentation at the 2016 Annual International Solid Freeform Fabrication (SFF2016) Symposium, August 8-10, Austin, TX, USA.
119. Hu, Y.B., Wang, H., Ning, F.D., and Cong, W.L., 2016, "Laser engineered net shaping of commercially pure titanium: effects of fabricating variables," Poster presentation at the Proceedings of the ASME 2016 International Manufacturing Science and Engineering Conference (MSEC2016-8895), June 27 - July 01, 2016, Blacksburg, VA, USA.
120. Ning, F.D., and Cong, W.L., 2015, "Additive manufacturing of CFRP composites using fused deposition modeling: effects of carbon fiber content and length," Poster presentation at the Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference (MSEC2015-9519 Poster), June 8-12, 2015, Charlotte, NC, USA.
121. Cong, W.L., Deines, T.W., Feng Q., Zhang, P.F., Qin, N., and Pei, Z.J., 2011, "Fundamental Research on Titanium Drilling with Rotary Ultrasonic Machining," Poster presentation at the Proceedings of 2011 NSF CMMI Research and Innovation Conference, Atlanta, GA, January 4-7.
122. Cong, W.L., Deines, T.W., and Pei, Z.J., 2011, "Using Cold Air as Coolant in Rotary Ultrasonic Machining of Carbon Fiber Reinforced Composite," Poster presentation at Proceedings of 2011 NSF CMMI Research and Innovation Conference, January 4-7, 2011, Atlanta, GA, USA.
123. Zhang, P.F., Cong, W.L., Zhang, Q., Zhang, M., Song, X.X., Qin, N., Deines, T.W., and Pei, Z.J., 2011, "Fundamental Research on Silicon Wafer Fine Grinding to Foster a Quantum Leap in Manufacturing of Silicon Wafers," Poster presentation at the Proceedings of 2011 NSF CMMI Research and Innovation Conference, January 4-7, 2011, Atlanta, GA, USA.
124. Zhang, P.F., Feng, Q., Zinke, E., Cong, W.L., Zhang, M., Song, X.X., Zhang, Q., Deines, T.W., Pei, Z.J., and Wang, D.H., 2010, "Ultrasonic vibration-assisted pelleting of cellulosic biomass for bioethanol manufacturing," Poster presentation at the Proceedings of ASME 2010 International Manufacturing Science and Engineering Conference (MSEC 2010-34342), October 12-15, 2010, Erie, PA, USA.
125. Cong, W.L., Zhang, P.F., Qin, N., Zhang, M., Song, X.X., Zhang, Q., Nottingham, N., Clark, R., Deines, T.W., Pei, Z.J., and Wang, D.H., 2009, "Ultrasonic vibration-assisted pelleting of cellulosic biomass for biofuel manufacturing," Poster presentation at the Proceedings of ASME 2009 International Manufacturing Science and Engineering Conference (MSEC2009-84432), October 4-7, 2009, West Lafayette, IN, USA.

**Submitted/under review manuscripts (Peer-reviewed Journals)**

126. Ning, F.D., Wang, H., and Cong, W.L., 2018, "Rotary ultrasonic machining of carbon fiber reinforced plastic composites: a study on fiber material removal mechanism through single grain scratching," International Journal of Advanced Manufacturing Technology. (Under review)
127. Wang, H., Ning, F.D., Li, Y.C., Hu, Y.B., and Cong, W.L., 2018, "Scratching-induced Surface Characteristics and Material Removal Mechanisms in Rotary Ultrasonic Surface Machining of CFRP," Ultrasonics. (Under review)
128. Wang, H., Hu, Y.B., Cong, W.L., Hu, Z.Y., and Wang, Y.Q., 2018, "A novel investigation on horizontal and 3D elliptical ultrasonic vibrations in rotary ultrasonic surface machining of CFRP composites," International Journal of Machine Tools and Manufacture.
129. Wang, H., Hu, Y.B., Cong, W.L., and Burks, A.R., 2018, "Rotary ultrasonic machining of carbon fiber reinforced plastic composites: effects of ultrasonic frequency," Journal of Manufacturing Processes. (Under review)
130. Liu, Z.C., Kim, H., Jiang, Q.H., Cong, W.L., and Zhang, H.C., (2017), "A literature review: recent advances on the significance of melt pool temperature measurement for laser additive manufacturing," Journal of Thermal Science and Engineering Applications. (Under review)

**Submitted/under review manuscripts (Peer-reviewed Conference Proceedings)**

131. Wang, H., Hu, Y.B., Cong, W.L., and Burks, A.R., 2018, "Rotary ultrasonic surface machining of CFRP composites: Effects of horizontal ultrasonic vibration," the 47th SME North American Manufacturing Research Conference (NAMRC 47-141), June 10-14, 2019, Erie, PA, USA. (Under review)
132. Lian, G.F., Yao, M.P., Liu, Z.C., Yang, S., Chen, C.R., Wang, H., Xiang, Y.S., and Cong, W.L., 2018, "Near-Net Shaping Control of Triangular Stacking in Laser Cladding Process," The 47th SME North American Manufacturing Research Conference (NAMRC 47-159), June 10-14, 2019, Erie, PA, USA. (Under review)
133. Hu, Y.B., Wang, H., and Cong, W.L., 2018, "Laser deposition-additive manufacturing of graphene oxide reinforced IN718 alloys: effects on surface quality, microstructure, and mechanical properties," Proceedings of the ASME 2019 14th International Manufacturing Science and Engineering Conference, American Society of Mechanical Engineers (MSEC2019-2985), June 10-14, 2019, Erie, PA, USA. (Under review)
134. Chen, X.X., Wang, H., Hu, Y.B., Zhang, D.Z., Cong, W.L., and Burks, A.R., 2018, "Rotary ultrasonic machining of CFRP composites: effects of machining variables on workpiece," Proceedings of the ASME 2019 14th International Manufacturing Science and Engineering Conference, American Society of Mechanical Engineers (MSEC2019-3019), June 10-14, 2019, Erie, PA, USA. (Under review)
135. Zhang, D.Z., Wang, H., Hu, Y.B., Chen, X.X., Cong, W.L., and Burks, A.R., 2018, "Rotary ultrasonic machining of CFRP composites: effects of carbon fiber reinforcement structure," Proceedings of the ASME 2019 14th International Manufacturing Science and Engineering Conference, American Society of Mechanical Engineers (MSEC2019-3014), June 10-14, 2019, Erie, PA, USA. (Under review)