

Chengli Wei, Ph.D.

Address: 900 College Street, Belton, TX 76513

Phone: 254-295-5035

Email: cwei@umhb.edu

Website: <http://hr.umhb.edu/profile/Wei/Chengli>

EDUCATION

- | | |
|------------------------------------------------|-------------------|
| Baylor University, Waco, TX, US | 08/2012 – 05/2018 |
| • Electrical and Computer Engineering (Ph.D.) | |
| Nankai University, Tianjin, China | 09/2009 – 07/2012 |
| • Optics Engineering (M.S.) | |
| Tianjin University, Tianjin, China | 09/2005 – 07/2009 |
| • Optoelectronic Technology and Science (B.S.) | |

PROFESSIONAL EXPERIENCE

- | | |
|------------------------------------|-------------------|
| Assistant Professor | |
| • University of Mary Hardin-Baylor | 08/2018 – Present |

RESEARCH INTERESTS

Specialty fibers, negative curvature fibers, chalcogenide glass fibers, photonic crystal fibers, mid-IR supercontinuum generation, nanophotonics, surface plasmon, 2-D materials, simulation, and modeling

TEACHING EXPERIENCE

University of Mary Hardin-Baylor (08/2018 – Present)

- ENGR 1310: Introduction to Engineering
- ENGR 1320: Introduction to Engineering Fundamentals
- ENGR 2301: The Effects of Climate Change
- ENGR 2345: Engineering Thermodynamics
- ENGR 2430: Electrical Circuit Theory
- ENGR 3137: Digital Logic Design Laboratory
- ENGR 3337: Digital Logic Design
- ENGR 3391: Signals and Systems
- ENGR 4320: System Dynamics and Control
- ENGR 4330: Engineering Electromagnetics
- ENGR 4380: Capstone Design I
- ENGR 4381: Capstone Design II

Baylor University (01/2017 – 05/2018)

- ELC 2320: Electrical Circuit Theory
- ELC 2130: Electrical Circuit Laboratory
- EGR 1302: Introduction to Engineering Analysis

STUDENT MENTOR

University of Mary Hardin-Baylor

- Mentored Tyler Dent, Anthoni Estrada, and Kasey Humphreys on Capstone design project: Remote monitoring system based on Michelson interferometer
- Mentored Ryan Himic, Ryan Hogan, and Robert Scanlon on Capstone design project: Image transmission

based on free space optical communication system
Baylor University

- Mentored Allwell Worgu on research project: Free space optical communication system
- Mentored Joshua Young on research project: Coupled mode theory in leaky waveguides

PROFESSIONAL SOCIETY

- Membership in Optical Society of America (OSA)
- Membership in IEEE
- Membership in IEEE Photonics Society

REVIEWER

- OSA: *Optics Letters, Optics Express, Journal of Optical Society of America B, Applied Optics*
- IEEE: *IEEE Photonics Journal, IEEE Access, Journal of Selected Topics in Quantum Electronics, Journal of Lightwave Technology (IEEE/OSA)*
- MDPI: *Applied Sciences, Photonics, Micromachines*
- Walter De Gruyter: *Nanophotonics*
- Elsevier: *Optics Communications*
- Springer: *Indian Journal of Physics*

AWARDS AND HONORS

- Chinese government award for outstanding self-financed student study abroad (2018). [[Representative speaker of awardees](#)]
- Second place in student competition during Optical Society of America (OSA) annual meeting (2017)
- Who's Who among Students in American Universities and Colleges (2017)
- Travel award in IEEE Photonics Society Summer Topicals Meeting Series (2015)
- Baylor travel award to professional meetings (2014, 2015, 2016, 2017)

FUNDED GRANTS

- Faculty Development Grants, 2019 – 2020 (PI; Amount: \$9,000)
- UMHB Summer Research Award, 2019 (PI; Amount: \$10,000)

ARCHIVAL JOURNAL PUBLICATIONS

1. **C. Wei**, J. T. Young, C. R. Menyuk, and J. Hu, "Temperature sensor based on liquid-filled negative curvature optical fibers," *OSA Continuum* **2**, 2123–2130 (2019).
2. J. O. White, J. T. Young, **C. Wei**, J. Hu, and C. R. Menyuk, "Seeding fiber amplifiers with piecewise parabolic phase modulation for high SBS thresholds and compact spectra," *Opt. Express* **27**, 2962–2974 (2019).
3. **C. Wei**, C. R. Menyuk, and J. Hu, "Geometry of chalcogenide negative curvature fibers for CO₂ laser transmission," *Fibers* **6**, 74 (2018).
4. **C. Wei**, C. R. Menyuk, and J. Hu, "Polarization-filtering and polarization-maintaining low-loss negative curvature fibers," *Opt. Express* **26**, 9528–9540 (2018). [[Media coverage: Advances in Engineering, Dec. 24, 2018](#)]
5. **C. Wei**, J. Weiblen, C. R. Menyuk, and J. Hu, "Negative curvature fibers," *Adv. Opt. Photonics* **9**, 504–561 (2017). (**Impact factor: 21.3**) [[Most cited AOP paper 2017](#)]
6. **C. Wei**, C. R. Menyuk, and J. Hu, "Comparison of loss in silica and chalcogenide negative curvature fibers as the wavelength varies", *Front. Phys.* **4**, 30 (2016).
7. **C. Wei**, C. R. Menyuk, and J. Hu, "Impact of cladding tubes in chalcogenide negative curvature fibers", *IEEE Photon. J.* **8**, 2200509 (2016).

8. **C. Wei**, C. R. Menyuk, and J. Hu, “Bending-induced mode non-degeneracy and coupling in chalcogenide negative curvature fibers,” *Opt. Express* **24**, 12228–12239 (2016).
9. Z. Zhu, J. Yuan, H. Zhou, J. Hu, J. Zhang, **C. Wei**, F. Yu, S. Chen, Y. Lan, Y. Yang, Y. Wang, C. Niu, Z. Ren, J. Lou, Z. Wang, and J. Bao, “Excitonic resonant emission absorption of surface plasmon in transition metal dichalcogenides for chip-level electronic photonic integrated circuits,” *ACS Photonics* **3**, 869–874 (2016). [[Media coverage: Laser Focus World Aug. 10, 2016](#)]
10. J. Hu, C. R. Menyuk, **C. Wei**, L. B. Shaw, J. S. Sanghera, and I. D. Aggarwal, “Highly efficient cascaded amplification using Pr³⁺-doped mid-infrared chalcogenide fiber amplifiers,” *Opt. Lett.* **40**, 3687–3690 (2015).
11. **C. Wei**, R. A. Kuis, F. Chenard, C. R. Menyuk, and J. Hu, “Higher-order mode suppression in chalcogenide negative curvature fibers,” *Opt. Express* **23**, 15824–15832 (2015).
12. S. Li, Z. Wang, Y. Liu, T. Han, Z. Wu, **C. Wei**, H. Wei, J. Li, and W. Tong, “Bending sensor based on intermodal interference properties of two-dimensional waveguide array fiber,” *Opt. Lett.* **37**, 1610–1612 (2012).
13. X. Zheng, Y. Liu, Z. Wang, T. Han, **C. Wei**, and J. Chen, “Transmission and temperature sensing characteristics of a selectively liquid-filled photonic-bandgap-fiber-based Sagnac interferometer,” *Appl. Phys. Lett.* **100**, 141104 (2012).

CONFERENCE PUBLICATIONS

1. **C. Wei**, F. Chenard, C. R. Menyuk, and J. Hu, “Negative curvature fibers for gas-filled fiber lasers”, in Sixth International Workshop on Specialty Optical Fibers and Their Applications (WSOF 2019), Vol. 11206 112060Q-1.
2. **C. Wei**, J. T. Young, C. R. Menyuk, and J. Hu, “Impact of the Glass Thickness in Fluid-Filled Negative Curvature Fibers for Temperature Sensing,” in *Frontiers in Optics + Laser Science APS/DLS, OSA Technical Digest (Optical Society of America, 2019)*, paper JW4A.5.
3. **C. Wei**, C. Menyuk, and J. Hu, “Optimization of chalcogenide negative curvature fibers for CO₂ laser transmission,” in *Proc. Conference on Lasers and Electro-Optics (CLEO 2019)*, San Jose, CA, paper JW2A.122.
4. **C. Wei**, C. R. Menyuk, and J. Hu, “Polarization-Filtering Negative Curvature Fibers,” in *Frontiers in Optics / Laser Science, OSA Technical Digest (Optical Society of America, 2018)*, paper JTU3A.1.
5. J. Hu, **C. Wei**, R. J. Weiblen, C. R. Menyuk, R. R. Gattass, L. B. Shaw, J. S. Sanghera, and F. Chenard, “Recent progress on chalcogenide negative curvature fibers,” 2018 10th International Conference on Advanced Infocomm Technology (ICAIT), Stockholm, Sweden, 2018, pp. 209–213.
6. F. Han, J. Shi, **C. Wei**, J. Hu, and X. Feng, “Efficient Visible Femtosecond Supercontinuum from an Air-Suspended-Core Microstructured Optical Fiber,” in *CLEO Pacific Rim Conference 2018, OSA Technical Digest (Optical Society of America, 2018)*, paper Tu3B.3.
7. **C. Wei**, J. Young, C. R. Menyuk, and J. Hu, “Temperature sensor using fluid-filled negative curvature fibers,” in *Proc. Conference on Lasers and Electro-Optics (CLEO 2018)*, San Jose, CA, paper JW2A.179.
8. C. R. Menyuk, **C. Wei**, J. Weiblen, J. Hu, R. Gattass, L. B. Shaw, and J. S. Sanghera, “Chalcogenide negative curvature fibers,” in *Proc. SPIE 10435, Technologies for Optical Countermeasures XIV, 104350I* (2017).
9. **C. Wei**, C. Menyuk, and J. Hu, “Bent negative curvature fibers using circular or elliptical cladding tubes,” in *Frontiers in Optics (Optical Society of America, 2017)*, paper JW4A.9.
10. **C. Wei**, C. Menyuk, and J. Hu, “Higher-order mode suppression in chalcogenide negative curvature fibers with gaps between cladding tubes,” in *Advanced Photonics 2016 (IPR, NOMA, Sensors, Networks, SPPCom, SOF)*, OSA Technical Digest (online) (Optical Society of America, 2016), paper JTU4A.32.
11. J. Hu, C. R. Menyuk, **C. Wei**, B. Shaw, J. S. Sanghera, and I. Aggarwal, “Pr³⁺-doped mid-infrared chalcogenide fiber amplifiers using cascaded Amplification,” in *Proc. Conference on Lasers and Electro-Optics (CLEO 2016)*, San Jose, CA, paper STh1O.7.
12. **C. Wei**, R. A. Kuis, F. Chenard, C. R. Menyuk, and J. Hu, “Mode coupling in chalcogenide negative curvature fibers,” in *Proc. Conference on Lasers and Electro-Optics (CLEO 2016)*, San Jose, CA, paper JTU5A.93.

13. **C. Wei**, O. Alvarez, F. Chenard, and J. Hu, “Empirical glass thickness for chalcogenide negative curvature fibers,” in Proc. 2015 IEEE Photonics Society Summer Topicals Meeting Series, Mid Infrared Photonics, Nassau, Bahamas, paper TuE3.3 (2015).
14. **C. Wei**, J. Hu, and C. Menyuk, “Bending-induced mode coupling in chalcogenide negative curvature fibers,” in Proc. Advanced Photonics, Boston, MA, paper NT2C.5 (2015).
15. **C. Wei**, R. Kuis, F. Chenard, and J. Hu, “Chalcogenide negative curvature hollow-core photonic crystal fibers with low loss and low power ratio in the glass,” in Proc. Conference on Lasers and Electro-Optics (CLEO 2014), San Jose, CA, paper SM1N.5.
16. **C. Wei**, Z. Wang, Y. Liu, B. Liu, H. Zhang, and Y. Liu, “Coupling characteristics of a fluid-filled dual-core photonic crystal fiber based on temperature tuning”, in SPIE/OSA/IEEE Asia Communications and Photonics, pp. 83071R (2011).

OTHER PRESENTATIONS

1. **C. Wei**, C. R. Menyuk, and J. Hu, “Design of chalcogenide negative curvature fibers,” OSA Optical Material Studies Technical Group Poster Session in CLEO 2016, San Jose, CA, Jun. 6, 2016.
2. **C. Wei**, C. Niu, and J. Hu, “Resonant emission and absorption of surface plasmon on silver nanowire and WS₂,” Baylor Material Science Workshop, May 25, 2016.
3. **C. Wei**, F. Chenard, C. R. Menyuk, and J. Hu, “Design of chalcogenide negative curvature fibers,” 2015 IEEE Photonics Society Summer Topicals Meeting Series. Mid Infrared Photonics, Nassau, Bahamas, MP7, Jul. 13–15 (2015).

ACTIVITIES

- UMHB Watson Scholars’ Day 2019 (Advisor for the second-place winner)
- UMHB Sader Day 2019
- UMHB Crusader Preview Weekend 2018
- Comsol Day Houston 2018
- Baylor Scholars Day Poster Session 2015–2018
- Baylor Engineering Launch Party 2016, 2018
- Baylor Premiere 2014–2018
- Baylor ECS Back-to-School Beach Bash 2014, 2015, 2018
- Waco Wonderland 2015
- Robotics Competition 2012, 2013

TECHNICAL SKILLS

Matlab, Mathcad, LabVIEW, Comsol Multiphysics, Lumerical FDTD solution, AutoCAD, SolidWorks, Finite-difference time-domain method, and Finite-element method