Tobey B. Carman

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Education

MSE — **Software Engineering, University of Alaska Fairbanks**
Aug 2012
- Modified a terrestrial ecosystem software model to increase resolution with respect to growing season (C++, Java, MySQL, Python).

BA — **The Colorado College**
May 2003
- Geology

Experience

Founder & Co-owner — **Inversion Labs, LLC (www.inversionlabs.com)**
2016 – present
- Create and maintain SaaS weather and avalanche data viewer: http://snowpacktracker.com.
- Update and develop additions for VB.Net application originally written for TM McCoy & Co in 2010.
- Standard Tools: Python, Pandas, Numpy, Matplotlib, Bokeh, Git, Heroku.

Research Assistant, Software Engineer — **Institute of Arctic Biology**
Sept 2011 – present
- Primary maintainer of: www.github.com/ua-snap/dvm-dos-tem.
- Working with researchers to develop, operate and maintain various ecologic software models (see AIEM project at www.snap.uaf.edu/).
- Software: Linux and GCC tool chain; Python, Numpy, Matplotlib, VirtualBox, LaTeX, Git, HPC user environments: Slurm Queue Manager, R, MPI.

Software Developer — **TM McCoy & Co.**
Sept 2010
- Developed VB.Net application for well site geologist to display mud gas.

Founder and Co-owner — **Climbing Skins Direct**
Aug 2006 – Aug 2008
- Built manufacturing and direct online sales business for skiing equipment.

Mudlogger — **TM McCoy & Co.**
Nov 2005 – Sept 2008
- Collected and analyzed rock samples and mud gas, coordinated with rig.

Publications

*Euskirchen, E. S. , **T. B. Carman**, and A. D. McGuire. 2014. *Changes in the structure and function of northern Alaskan ecosystems when considering variable leaf-out times across groupings of species in a dynamic vegetation model.* Global Change Biology, Vol. 20, Issue 3, 963-978.

*Gray, S.T., A. Bennett, W.R. Bolton, A.L. Breen, **T. Carman**, E. Euskirchen, H. Genet, E. Jafarov, J. Jenkins, T. Kurkowski, M. Lindgren, P. Martin, S. McAfee, A.D. McGuire, S. Marchenko, R. Muskett, S. Panda, J. Reynolds, A. Robertson, V. Romanovsky, T.S. Rupp, K. Timm, and Y. Zhang. 2014. *Using integrated ecosystem modeling to improve our understanding of climate change impacts in the Alaska region.* Alaska Park Science. 12(2).

*Wright, P., Bergin, M., Dibb, J., Lefer, B., Domine, F., **Carman, T**., Carmagnola, C., Dumont, M., Courville, Z., Schaaf, C., & Wang, Z. 2014. *Comparing MODIS daily snow albedo to spectral albedo field measurements in Central Greenland.* Remote Sensing of Environment, Vol. 140, 118-129.

Wright, P. and **T. Carman** (2018), New data visualization tool for the Bridger-Teton Avalanche Center, The Avalanche Review, Vol. 36.4, 8.

* Peer Reviewed