



Macdonald & Lawrence Timber Framing Ltd.

RANDY CHURCHILL, PHD

SENIOR PROJECT MANAGER

PROFESSIONAL EXPERIENCE

- Senior Project Manager, Macdonald & Lawrence Timber Framing Ltd., British Columbia, 2007
- Principal & Owner, Joint Effort Timber Framing, Inc., Cambridge, Vermont, 1998-2006
- Timber Frame Business Council, Board of Directors, 2000-06
- Project Manager & Designer, Kondor Post & Beam, Cambridge, Vermont, 1996-97
- Research Assistant Professor, West Virginia University, Morgantown, West Virginia, 1993-96
- Graduate Research Assistant, West Virginia University, Morgantown, West Virginia, 1999-92

PROFESSIONAL ASSOCIATION

- Timber Framers Guild (often called upon as a project manager or instructor for TFG events)

SELECTED PROJECTS

- **New Barn for Farm & Wilderness Camps, Plymouth, Vermont (2006)**
This large non-profit project provided Farm & Wilderness Camps with a new barn for youth programs. As the Timber Framers Guild's project manager, Randy designed the \$88,000 barn and coordinated all preparation and site work. The project was integrated with summer camp programs for youth aged 5 to 18 years. Challenges included a highly choreographed hand-raising of large timber bents with 500 people using 1.5 km of rope and complex manual rigging. Randy managed 12 paid instructors and the 40 volunteers who provided 3,000 hours of labour towards the project.
- **Vaughan Homestead Foundation, Hallowell, Maine (2005)**
The 30' x 60' Grange Hall was removed in 2000 due to massive decay and neglect. In 2005 Randy salvaged the wood from this historic structure and used it to create a new studio on the Foundation grounds. Two original 30' queen post trusses were used in the new building as originally designed. Raising the timber frame was a popular event involving the surrounding community. The Vaughan Homestead Foundation is an educational organization dedicated to the maintenance of historic structures, artifacts, and land in that community.
- **Silver Oak Lodge, Georgia (2000)**
This 18,000 sq ft private lodge near Augusta, Georgia was designed by Randy. He also produced the timber frame and panel enclosure system. Randy's work included diligently working with the general contractor to assure completion of the multi-million dollar lodge, on-time and on-budget.
- **Cook Barn, Plymouth, New Hampshire (2004)**
Randy designed and supervised the production a custom timber frame, measuring 48' x 64' with three finished floor levels. The raising of the timber frame included the simultaneous choreography of a large raising crew operating three mid-sized cranes – two cranes hanging bents of 16,000 lbs and the third crane flying in connection pieces.
- **Fort Frederick State Park, Maryland (1998)**
Fort Frederick encapsulates American history from the colonial period to the present and is one of the largest fortifications built by English colonists in North America, and is the oldest stone fort in USA. Randy designed, produced and installed a circa 1600 replica sentry box, a 5' x 5' timber structure used around the fort. The fort celebrated its 250th anniversary in 2006.

EDUCATION

- PhD, Engineering, West Virginia University, 1992
- MSc Mechanical Engineering, West Virginia University, 1988
- BSc Mechanical Engineering, West Virginia University, 1986

PAPERS AND PUBLICATIONS

- “A Model to Simulate Vehicle Crashworthiness,” Randolph A. Churchill, Christopher Wirts, Mark Kenamond, Victor Mucino, and James E. Smith. SAE 14VSM59, 1996
- “Automotive Crashworthiness: Requirements for Supercomputer Applications,” Victor Muciño, James E. Smith, and Randy Churchill. *Congreso Internacional de Supercomputo y Centros de Investigacion Sobre el Transporte*, sponsored by Instituto Mexicano del Transporte, Conference Proceedings October 19-21, 1994
- “Modeling Method for Low Prandtl Number Fluids Used in the Coatings Industry,” Greg Thompson, Randy Churchill and James E. Smith, Sixth International Conference on CAD/CAM, Robotics and Factories of the Future, pp. 818-823, August 19-22, 1991, South Bank Polytechnic in London, UK.
- “A Concept Review of Low-Heat-Rejection Engines,” James E. Smith and Randy Churchill, March 1989, *Journal of Applied Mechanics Reviews*, Vol. 42, No. 3, pp. 71-90, American Society of Mechanical Engineers Book No. AMR052, 1989.
- “Clean Engines – A Combination of Advanced Materials and a New Engine Design,” James E. Smith, Randolph A. Churchill and Jacky Prucz, Proceedings of the 3rd International New Energy Technology Symposium/Exhibition, June 25-June 28, 1988, Hull/Ottawa, Canada.
- “Clean Engines – A Combination of Advanced Materials and a New Engine Design,” James E. Smith, Randolph Churchill, and Jacky Prucz. *Proceedings of the 3rd International New Energy Technology Symposium/Exhibition*, Hull/Ottawa, Canada; June 25-28, 1988.

CAREER HIGHLIGHTS

- **Owner, Joint Effort Timber Framing, Vermont USA**
As the owner of Joint Effort Randy designed, produced and raised 70 custom timber frames between 1998 and 2006. All were unique designs incorporating various species of wood and most included challenging site logistics. Responsible for all aspects of business strategy, sales, production, and oversight (staff of 4-8). Annual budget: \$450,000 - \$750,000.
- **Production Manager, Kondor Post & Beam, Vermont USA**
Coordinated and directed all sales, contracting, design, production, purchasing, fiscal responsibility and follow-up for custom timber frame projects nationwide. Annual budget: \$500,000
- **Co-Principal Investigator, West Virginia University**
“Alternative Fueled Vehicle Training Program”, a multi-year, multi-disciplinary project sponsored by the U.S. Environmental Protection Agency.
Term of project: November 1992 - December 1995.
Total amount of funding to Mechanical and Aerospace Engineering Department: \$660,000
Total amount of funding to West Virginia University: \$2.7 million
- **Co-Principal Investigator, West Virginia University**
“Crashworthiness of Lightweight Automotive Structures”, a project for the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA).
Term of project: September 1993 – April 1995.
Total project funding: \$850,000