

**Chief Software Architect**

<i>Expertise</i>	Engineering Software Development (C, C++, Fortran, FLAC, FLAC3D, UDEC, 3DEC, PFC, PFC3D)
<i>Education</i>	Ph.D. (Theoretical and Applied Mechanics), 2004, Cornell University B.S. (Aerospace Engineering & Mechanics), 1992 University of Minnesota
<i>Honors &amp; Awards</i>	Harriet Davis Fellowship, Cornell University, 2001 Cornell Fellowship, Cornell University, 1999-2000

*Professional Experience*

	<i>Itasca Consulting Group, Inc., Minneapolis, Minnesota</i>
2010 – Present	<i>Principal, Chief Software Architect</i>
2004 - Present	<i>Senior Software Engineer</i>
1999 - 2004	<i>Associate, Software</i>
1992-1999	<i>Software Engineer</i>
1987-1992	<i>Assistant Engineer</i>

*Project Experience*

Conception, development and implementation of a new computational fluid dynamics (CFD) method for 2D incompressible viscous fluid around moving geometries; experimentation to discover the wing-interaction forces generated by dragonflies; creation and maintenance of a laboratory Linux network at Cornell University.

Assistance in the development and source control of Itasca codes FLAC (Fast Lagrangian Analysis of Continua), FLAC3D (Fast Lagrangian Analysis of Continua in 3 Dimensions), UDEC (Universal Distinct Element Code), 3DEC (3-Dimensional Distinct Element Code), PFC2D (Particle Flow Code in 2 Dimensions), and PFC3D (Particle Flow Code in 3 Dimensions) and provision of support for said codes. Development and maintenance of a software library that included user-interface methods and common numeric needs in a platform-independent manner; development or assistance in the development of continuum methods for solid mechanics, discrete methods for solid mechanics and sharp discontinuity in continuum methods for fluid mechanics.