



Professor Colin A. Rogers

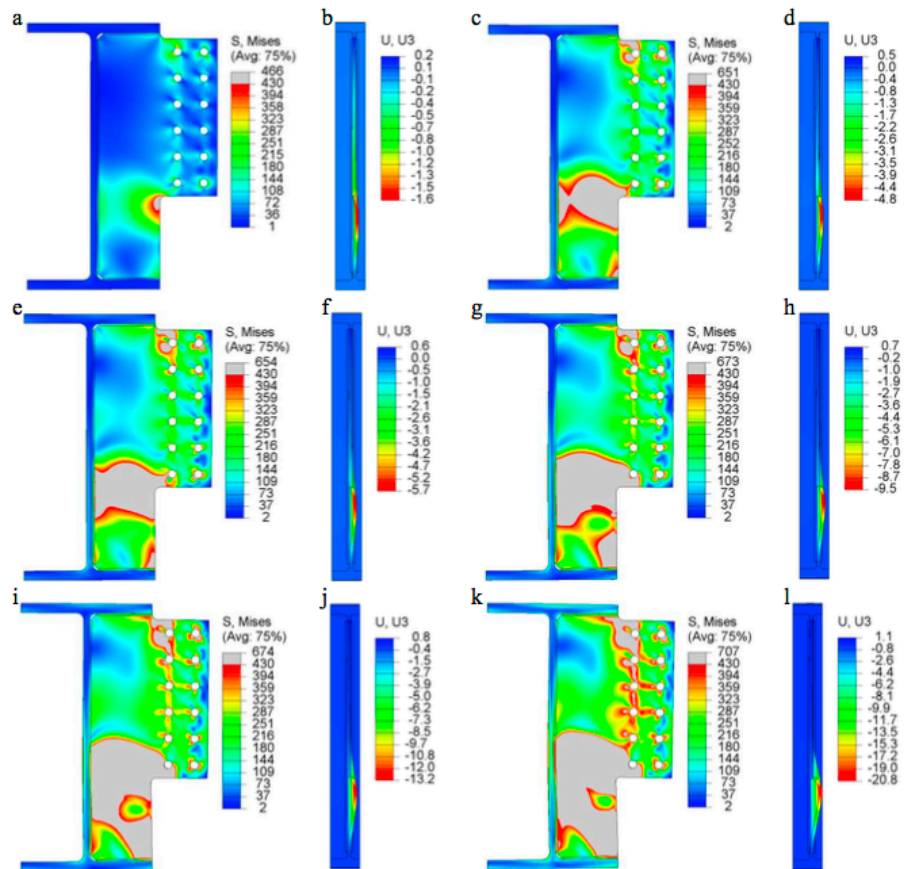


Figure 4-FE model predictions of specimen BG3 (single sided shear tab): a) stress at $\theta=0.74\%$, b) out-of-plane deformation at $\theta=0.74\%$, c) stress at $\theta=1.24\%$, d) out-of-plane deformation at $\theta=1.24\%$, e) stress at $\theta=1.34\%$, f) out-of-plane deformation at $\theta=1.34\%$; g) stress at $\theta=1.65\%$, h) out-of-plane deformation at $\theta=1.65\%$, i) stress at $\theta=1.96\%$, j) out-of-plane deformation at $\theta=1.96\%$, k) stress at $\theta=2.74\%$, l) out-of-plane deformation at $\theta=2.74\%$, (The gray colour represents yielded regions)

From: Motallebi M, Lignos D, Rogers CA (2017) "Stability of extended beam-to-girder shear tab connections under gravity induced shear force", Structural Stability Research Council 2017 Annual Stability Conference, San Antonio, USA. Paper No. 32.

See:

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Civil Engineering and Applied Mechanics
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Biography:

Professor Rogers joined the structures group of the Department in 1999. Structural steel engineering is his area of expertise. Coursework at the undergraduate level includes the design of steel, reinforced concrete and wood buildings, and at the graduate level involves the design of steel and wood structures. Research activities comprise; the seismic design of cold-formed steel framing systems, the seismic design of low-rise steel buildings and seismic deficient braced steel frames, as well as the design of structural steel connections.

Education:

B.A.Sc. (Civil Eng, University of Waterloo, Canada, 1992)
M.A.Sc. (Civil Eng, University of Waterloo, Canada, 1995)
Ph.D. (Civil Eng, University of Sydney, Australia, 1999)
Postdoctoral Research Fellow (École Polytechnique of Montreal, Canada, 1999)

Selected Publications:

- C. A. Rogers and H. H. Robertshaw, Shape memory alloy reinforced composites, *Eng. Sci. Preprints* 25 (1988) 20–22.
- C. Fuller, C. A. Rogers and H. H. Robertshaw, Active structural acoustic with smart structures, *Proc. SPIE Conf. Fiber Optic Smart Structures and Skins*, SPIE, Vol. 1170 (1989) 338–358
- C. A. Rogers, C. Liang and J. Jia, Behavior of shape memory alloy reinforced composite plates — Part I: Model formulation and control concepts, in *Proc. 30th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conf.* (1989) pp. 2011–2017.
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- C. A. Rogers, Active vibration and structural acoustic control of shape memory alloy hybrid composites: Experimental results, *J. Acoust. Soc. Am.* 88 (6) (1990) 2803–2811.
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- W. S. Anders, C. A. Rogers and C. R. Fuller, Control of sound radiation from shape memory alloy hybrid composite panels by adaptive alternate resonance tuning, in *Proc. 32nd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conf. Part 1* (1991) pp. 159–168.
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- B.-T. Wang and C. A. Rogers, “Laminate plate theory for spatially distributed induced strain actuators,” *Journal of Composite Materials*, vol. 25, no. 4, pp. 433–452, 1991.
- W. S. Anders, C. A. Rogers and C. R. Fuller, Vibration and low frequency acoustic analysis of piecewise-activated adaptive composite panels, *J. Compos. Mater.* 26 (1) (1992) 103–120.
- C. Liang and C. A. Rogers, A multi-dimensional constitutive model for shape memory alloys, *J. Eng. Math.* 26 (3) (1992) 429–443.
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- Hancock, G. J., Rogers, C. A., Schuster, R. M. (1996), Comparison of the distortional buckling method for flexural members with tests, in: *Proceedings of the 13th International Specialty Conference on Cold Formed Steel Structures*, St. Louis, Missouri, U.S.A., October 17-18, pp. 125-139.
- Rogers CA, Schuster RM (1997) "Flange/Web Distortional Buckling of Cold-Formed Steel Sections in Bending", *Thin-Walled Structures* 27(1): 13-29.
- Rogers CA, Yang D, Hancock GJ (2003) "Stability and Ductility of Thin High Strength G550 Steel Members and Connections", *Thin-Walled Structures* 41(2-3): 149-166.

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Shamim I, Morello D, Rogers CA (2010), "Dynamic testing and analyses of wood sheathed / CFS framed shear walls", 9th US National & 10th Canadian Conference on Earthquake Engineering, Toronto, Canada, Paper No. 1069.

Shamim I, DaBreo J, Rogers CA (2011), "Shake table testing of steel sheathed / cold-formed steel framed shear walls", 6th International Conference on Thin-Walled Structures, Timisoara, Romania, 463-470.

Bakhti F, Tremblay R, Rogers CA (2012), "Revisiting the SDI and ECCS methods for in-plane shear flexibility of metal roof deck diaphragms using 3D non-linear finite element analysis", 15th World Conference on Earthquake Engineering, Lisbon, Portugal. Paper No. 2482.

Shamim I, Rogers CA (2012), "Numerical modeling and calibration of CFS framed shear walls under dynamic loading", 21st International Specialty Conference: Cold-Formed Steel Design & Construction, St. Louis, USA, 687-701.

Ibrahim O, Lignos D, Rogers CA (2013) "Estimation of residual stresses in thick steel plates due to welding through finite element simulation", 3rd Specialty Conference on Material Engineering & Applied Mechanics, Canadian Society for Civil Engineering, Montreal, Canada, Paper No. 82.

Bakhti F, Tremblay R, Rogers CA (2013) "In-plane shear flexibility evaluation of fastened steel flat plate by numerical simulation considering the interaction between connectors and thin plate", 5th International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa. Paper No. 213.

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Nikolaïdou V, Rogers CA, Lignos D (2018) "Influence of diaphragm flexibility on the seismic response of cold-formed steel structures", 11th U.S. National Conference on Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, USA, Paper No. 53.

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