



# 2007-2008

*October Meeting Notice*

## Minnesota Geotechnical Society

### Designing with Geogrids

Sara Garland, Geosynthetic Specialist, Contech

Engineers have undoubtedly faced the challenge to reinforce soils since prehistoric times. Dating back to 3000 B.C., the use of timbers of nearly uniform size and length were tied together to form mattresses. Such mattresses were used in roads to bridge over peat and are better known as “corduroy” roads. Geotextiles emerged in the late 1950s. Over the years, many new products and companies have emerged. Today, the choices can be overwhelming. The family of geosynthetics now include; geotextiles, geogrids, geonets, geomembranes, geocomposites and more.

Geosynthetics are made from synthetic polymers. The word “polymer” comes from the Greek words *poly* and *meros*, which means “many parts”. Polymers are repeating molecular compounds, joined together to form a chain. Different polymers possess different properties. Understanding the molecular makeup and manufacturing process is crucial in order to design with geosynthetics.

The major function of geogrids is reinforcement. Geogrids can mainly be classified as extruded, woven or welded. The original geogrids were brought to the United States by Tensar in 1982. Tensar grids are extruded. They are manufactured with heavy gauge sheets of polyethylene or polypropylene. The sheets are punched to create holes, heated, and then drawn uniaxially or biaxially. Woven geogrids are typically polyester yarns, woven and coated (usually with PVC). Welded geogrids are typically polyester fibers, bundled together and coated with polypropylene. The polypropylene straps are then melt-bonded at rib intersections.

Learn about the different molecular makeup and manufacturing processes of geogrids. Learn about the different applications for geogrids. And learn how to design using geogrids.

**Date:** Wednesday, October 10, 2007

**Location:** Majors Sports Café  
2801 Snelling Ave  
Roseville, MN

**Time: 6:00** Social Hour - Our thanks to Contech for their sponsorship.

**7:00** Dinner – Salad, Rolls, Coffee/Soda and a choice of:

1. St Louis Style BBQ Ribs– Slow Roasted- Half rack served with French fries and Coleslaw
2. Feta Cheese and Sun-Dried Tomato Stuffed Walleye - Served over white cheddar mashed potatoes with a drizzle of lemon thyme butter sauce.
3. Seared Chicken Parmesan
4. Manicotti – Fresh Pasta tubes filled with ricotta, mozzarella and parmesan cheeses. Baked in marinara sauce and finished with melted mozzarella.

**8:00** Presentation – Sara Garland, BSCE from Michigan Technological University with an emphasis in Geotechnical Engineering, Geosynthetic Specialist, Contech

(One professional development hour toward continuing education requirements for Professional Engineers is available).

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<http://www.mngeotechnicalsociety.com>

**Cost:** \$25.00 members, \$30.00 non-members, and \$5.00 Full-time students, payable to MGS at the door.

**Reservations:** Requested by 12 Noon, Friday, October 5, 2007.

Please register via the website at <http://www.mngeotechnicalsociety.com/eventsmpls.asp> or call Paul Martin to indicate your dinner selection. Paul may be reached by phone: (651) 487-7084

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