



**IEEE Vehicular Technology Society  
Philadelphia Chapter**



**January 14, 2022 Meeting Announcement**

**Topic: TCRP Project C-24, Transit Traction Power Cables: Replacement Guidelines**

**Sponsor:** IEEE Vehicular Technology Society (VTS) Philadelphia Chapter

**Speaker:** Dr. Kasim Korkmaz, Associate Professor at Eastern Michigan University

**Professional Development Hours:** Attendees may apply for 2.0 PDH upon completion of lecture. Certificates will be provided through the IEEE Certificates Program, accepted in all states.

**Meeting date/time:** Friday, January 14, 12 pm to 2 pm (Eastern Standard Time)

**Meeting location:** Zoom virtual meeting format.

<https://emich.zoom.us/j/87655977752?pwd=VmtzQ0JnVk1hQW1QR0tJOW9RdEE4dz09>

**Meeting ID:** 876 5597 7752 **Passcode:** 372212

**Cost of meeting:** There is no charge for meeting attendance.

PDHs are provided after sending \$5.00 payment to Brandon Swartley via Zelle or by check.

**Reservations:** *Attendees are required to register at* <https://events.vtools.ieee.org/m/299154>

A valid email address must be provided along with course evaluation forms required for PDHs. If you have any questions, please contact Brandon Swartley at [brandon.swartley@ieee.org](mailto:brandon.swartley@ieee.org).

**Abstract:** The transit industry uses insulated cable for traction power supply and negative return cables between traction power substations, tie switches, and points of delivery to the vehicles. Third rail systems use jumper cables to provide continuity of power around third rail gaps and expansion joints. The conductor insulation system used for traction power cables, as well as for lower voltage power distribution and signal/communication systems, typically has a specified life of 30 years. Many of the transit systems in the United States are that age or older with original cables still in service. Many cables within transit tunnels have had failures because of the water penetration through and around the cable insulation, causing damage to the insulation and corrosion of the copper conductor. In some subway tunnels, the conduits themselves have degraded to the point where they cannot be cleaned out and reused for their original purpose. Transit systems have experienced cable fires and system-wide closures due to the degradation of traction power cable insulation. In recent years, major storms affecting the United States have inundated transit tunnels with fresh and contaminated water and exacerbated cable lifecycle concerns. Dr. Korkmaz will discuss the causes of cable damage and the replacement criteria for traction power cables.

**Speaker:** Dr. Kasim Korkmaz is an Associate Professor in Civil Engineering and Construction Management at Eastern Michigan University, the lead institution for this project. He was previously with Michigan State University. Prior to entering academics, Dr. Korkmaz worked as a project engineer in Pennsylvania. He has conducted risk assessment projects on several major projects throughout the country, Europe, and the Middle East. He has extensive background in research and practice of project delivery systems and risk assessment and modeling. Dr. Korkmaz's research focuses on constructed facilities and infrastructures from concept through maintenance. He has completed various projects in highway construction. He has been working as the PI for this project with his two Co-PIs from Michigan State University and Wayne State University.

**IEEE VTS Philadelphia Chapter Officers:**

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