NURail UTC Specific Performance Indicators
Year 1: January 1, 2012 – December 31, 2012

Research Capability

1. Number of papers on NURail sponsored research published in peer-reviewed journals or industry publications 0
2. Number of publications in academic and industry conference proceedings 10
3. Number of presentations at academic and industry conferences and workshops 54
4. Number of NURail sponsored theses or dissertations at the MS and PhD levels.
    A. Number of MS theses 1
    B. Number of PhD dissertations 0
5. Number of NURail final reports issued during the grant year 2
6. Number of citations of each of the above 0
7. Number of research tools (lab equipment, models, software, test processes, etc.) developed as part of NURail sponsored research 3

Leadership

1. Number of rail-related professional and service organization committees that NURail faculty researchers participate in or lead.
    A. Number participated in 38
    B. Number led 8
2. Number of research and educational colloquia and workshops organized 20
3. Number of rail sessions developed and led at major transportation and rail industry conferences 6
4. Number of faculty researchers in leadership positions in:
    A. Professional societies 7
    B. Advisory committees 5
    C. Conference organizing committees 8
5. Number of relevant awards received during the grant year 8
6. Number of NURail professionals participating in short-term and long-range transportation planning 9
7. Number of other activities promoting rail academic research and education 25

Education and Workforce Development

To insert detailed information on education and workforce development, please use **https://docs.google.com/a/mtu.edu/spreadsheet/ccc?key=0AuoOKSqDqawNdFk4UUhnN1FyTmhtNnJRUVBwNkRrYWc#gid=8**

1. Number of rail courses offered (not necessarily NURail stimulated).
    A. On-campus 15
    B. Distance 3
2. Number of rail related classes developed or modified as a result of NURail funding.
    A. On-campus 7
    B. Distance 1
3. Number of students participating in course offerings (both on-campus and on-line).
    A. On-campus 331
    B. Distance 15
4. Number of internships and full time positions secured in the industry and government during the grant year.
    A. Number of internships 29 Org. type (railroad, engineering consulting firm, government, or other) railroad, other (research)
    B. (repeat for each organization type)
    C. Number of full time positions 31 Org. type (railroad, engineering consulting firm, government, or other) engineering consulting
    D. (repeat for each organization type)
5. Number of NURail sponsored students participating in academic or industry conferences, workshops, or symposia.
    A. Name of conference, workshop, or symposia AREMA Number of students 78
    B. Name of conference, workshop, or symposia TRB Number of students 5
    C. Name of conference, workshop, or symposia International Concrete Tie Symposium Number of students 8
    D. Name of conference, workshop, or symposia UIC HSR Conference Number of students 5
    E. Name of conference, workshop, or symposia TRB Summer Rail Number of students 6
    F. Name of conference, workshop, or symposia Railroad Environmental Conference Number of students 20
    G. Name of conference, workshop, or symposia JRC 2012 Number of students 14
    H. Name of conference, workshop, or symposia INFORMS 2012 Number of students 6
    I. Name of conference, workshop, or symposia RTC Users Group Number of students 1

  J. Name of conference, workshop, or symposia BNSF Derailment Analysis Workshop Number of students 1

6. Number of K-12 outreach activities and student participants the grant has helped to support 14
7. Number of initiatives / activities related to training / workforce development (live and online) 27

Technology Transfer

Please list and briefly describe any indicators for the three categories.

1. Technology transfer focused activities (articles, seminars, posters, workshops, etc.) 19
2. Professional development participation (meetings, briefings, committees) 18
3. New Technologies / Innovation (applications, concepts, technologies, etc. adopted by the rail industry, licenses, cooperative research agreements or creation of new business entities) 0

Collaboration

Between NURail Partners (additional information needed to avoid double counting of partner submissions)

1. Number of joint research proposals 2
  A. Funding opportunity 2 NCRRP Proposals NURail partner(s) UIUC, UTK, MTU
  B. (repeat for additional listings)
2. Number of joint papers 2
  A. Railway Engineering Education Symposium (REES) – Universities and Industry Collaborate to Develop Railway Education, NURail partner(s) UTK, MTU, UIUC, RHIT
  B. 2013 JRC Paper on REES NURail partner(s) MTU, UIUC, RHIT, UTK
3. Number of joint presentations.
  A. Presentation title na NURail partner(s) co-presenter 0
  B. (repeat for additional listings)
4. Number of jointly developed or taught courses.
  A. Course name na NURail partner(s) co-developer or co-instructor 0
  B. (repeat for additional listings)
5. Number of jointly organized seminars, workshops, or conferences 1
  A. Rail Vehicle/Track Interaction Workshop NURail partner(s) co-organizer UIC, UIUC, UKY
  B. (repeat for additional listings)

With Outside Organizations

1. Number of organizations collaborated with during the grant year 24
2. Number of joint research proposals 2
3. Number of joint papers 0
4. Number of joint presentations 1
5. Number of jointly developed or taught courses 0
6. Number of jointly organized seminars, workshops, or conferences 2