



Meeting North Carolina's Needs

Through the UNC Tomorrow initiative, citizens across North Carolina told UNC's sixteen public universities to communicate their resources and expertise to wider audiences. UNC's technology commercialization and start-up partners have echoed this same message during our ongoing innovation development and transfer initiative – clearly stating that to grow our research and economic development impacts, our institutions must convey to audiences all over the world the knowledge, skills, and competitive advantages that reside throughout our state. UNC has heard the call and is responding with a new tool that positions us to engage with partners and communities at unprecedented levels.

Introducing....REACH NC

Leaders from UNC General Administration, NC State University, UNC Chapel Hill, Duke University, and the Renaissance Computing Institute (RENCI) have partnered with Elsevier to create **REACH NC** (Research, Engagement And Capabilities Hub of North Carolina), a portal to access information on the expertise of university personnel.

REACH NC users can search for and view the expertise profiles of individuals or entire units. Profiles are generated using publications, sponsored research awards, intellectual property, and course descriptions (see image on next page). While they can be enhanced with additional data, expertise profiles are built upon institutional or publicly available data and generally require minimal upkeep by individuals.

Value for NC Economic Development

Businesses and economic developers ask for university assistance on several fronts, like

- Where can I find a faculty member to help with this technology challenge?
- How do I know which schools produce students with the skills I need in employees?
- What institutions have equipment that can help us with specialized R&D tasks?
- Who can accompany us as a subject matter expert on a client visit?
- Who's working on the latest technologies in my field that can help my business grow?

Whether attracting new businesses to North Carolina, retaining existing ones, or enhancing the effectiveness and competitiveness of other NC institutions, REACH NC is positioned to help, with information about and access to potential collaborators in research, problem solving, and economic development.

Maximizing REACH NC's Impact

REACH NC is currently in its initial rollout phase and contains the expert profiles of approximately 3,000 individuals at two UNC institutions. In January 2012, the portal will include nearly 5,000 profiles from fifteen UNC institutions, with additional rollouts planned throughout the year. The vision is to expand participation to other research institutions in the state.



NC STATE UNIVERSITY



renci

Duke
UNIVERSITY



Typical REACH NC Expert Profile Page

Drill down for details on expert activity in several categories.

Search by concept or name, or insert paragraphs from other sources to find relevant experts (Full Text search).

Alex Qin Huang - REACH NC - SciVal Experts v4.0 - Windows Internet Explorer

http://staging.experts.scival.com/reachnc/expert.asp?n=Alex+Qin+Huang&w_id=329790

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Alex Qin Huang - REACH NC - SciVal Experts v4.0

REACH NC

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Alex Qin Huang

North Carolina State University, College of Engineering, Electrical & Computer Engineering

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Publications

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1. Woongje Sung; Edward Van Brunt; S. J. Baliga; Alex Q. Huang
A new edge termination technique for high-voltage devices in 4H-SiC Multiple-floating-zone junction termination extension
IEEE Electron Device Letters 2011;32(7):880-882.
2. Liyan Zhang; Alex Q. Huang
Model-based fault detection of hybrid fuel cell and photovoltaic direct current power sources
Journal of Power Sources 2011;196(11):5197-5204.
3. Gangyao Wang; Seunghun Baek; Joseph Elliott; Arun Kadavelugu; Fei Wang; Xu She; Sumit Dutta; Yang Liu; Tiejun Zhao; et al.
Design and hardware implementation of Gen-1 silicon based solid state transformer
Conference Proceedings - IEEE Applied Power Electronics Conference and Exposition - APEC 2011;0:1344-1349.

Similar Experts

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	Publications
B. Jayant Baliga	344
Subhashish Shattac...	127
Gerald Lucovsky	596
Mesut E Baran	77
Ergun Miodrag Luk...	41

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Trends

Explore the Research Trends

Research Network

Alex Qin Huang

North Carolina State University
College of Engineering
Electrical & Computer Engineering

North Carolina State University
Centers, Institutes, and Special Programs

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See visualizations of expert's research trends over time and his network of collaborators.

Overview of NC Race to the Top (RttT) Initiatives

RttT Initiative	Objectives	Budget
A. Standards and Assessments		
Transition to new standards and assessments	<ul style="list-style-type: none"> • Generate stakeholder support for transition • Ensure that all teachers understand the new standards and assessments • Ensure that stakeholders understand and use summative assessments effectively and appropriately 	See Budgets for Instructional Improvement System (section C) and Professional Development (section D)
B. Data Systems to Support Instruction		
State data use	<ul style="list-style-type: none"> • Ensure that NC data are accessible to all relevant stakeholders • Ensure that all relevant stakeholders are prepared to make effective and appropriate use of the data (linked to section D: Professional Development) • Ensure that data are used to support decision-making and continuous improvement processes 	See Budget for Professional Development (section D)

RttT Initiative	Objectives	Budget
C. Data Systems to Support Instruction		
Technology infrastructures and resources	<ul style="list-style-type: none"> • Establish PK-12 education technology “cloud” infrastructure to provide cost-effective and robust shared networking infrastructure for LEAs (NCEdCloud) • Provide digital tools and resources to support all RttT initiatives • Prepare all educators to make effective use of online resources and tools (linked to section D: Professional Development) 	\$34,639,376
Instructional Improvement System	<ul style="list-style-type: none"> • Increase the use of instructional improvement systems • Develop a statewide instructional improvement system to support curriculum-embedded assessments, diagnostic assessments, curriculum monitoring, and summative assessments to inform teacher planning, student placement decisions, and parental involvement • Provide technology infrastructure to support effective use of the instructional improvement system • Prepare teachers to make effective use of the instructional improvement system (linked to section D) • Improve student achievement outcomes, especially for low-performing students 	\$25,422,129

RttT Initiative	Objectives	Budget
D. Great Teachers & Leaders		
Teacher and principal evaluation planning and processes	<ul style="list-style-type: none"> Fully implement the new NC teacher and principal evaluation processes statewide, with student achievement growth data used as a significant component in the balanced evaluation Develop, with the engagement of all stakeholders, a state-level, equitable, reliable, and transparent system for integrating student achievement growth data into evaluations for all teachers and principals 	\$5,320,100
Performance incentives for lowest-achieving schools	<ul style="list-style-type: none"> Provide opportunities to earn incentives based on student performance Transition to classroom-level incentives 	\$18,218,299
Regional Leadership Academies	<ul style="list-style-type: none"> Increase the number of principals qualified to lead transformational change in low-performing schools in both rural and urban areas Establish regional leadership academies to prepare principals to lead in the Northeast, Sandhills, and Piedmont-Triad regions 	\$18,608,809

RttT Initiative	Objectives	Budget
Expand teacher recruitment and licensure programs	<ul style="list-style-type: none"> Teach for America – Increase the number of TFA teachers in low-performing schools; focus recruitment on specific needs of each LEA NC Teacher Corps – Using TFA-like approach, recruit and prepare NC college graduates to teach in low-performing schools that are not served by TFA Induction Support Program for New Teachers – Provide comprehensive, three-year induction program for novice teachers in low-achieving schools 	<p>\$7,369,400</p> <p>\$5,100,000</p> <p><u>\$7,774,887</u></p> <p>\$20,244,287</p>
Strategic staffing initiatives	<ul style="list-style-type: none"> Support LEA development, implementation, and evaluation of programs to strengthen staffing in low-performing schools and high-needs subjects and specialties Pilot/validate the effectiveness of utilizing an incentive to support teacher recruitment and retention in the lowest-achieving schools 	<p>\$250,000</p> <p>\$3,137,286</p>
North Carolina Virtual Public School expansion	<ul style="list-style-type: none"> Expand the availability and use of virtual courses in mathematics and science in low-performing schools and other schools in which curriculum offerings are limited and effective teachers are unavailable locally 	<p>\$6,456,022</p>

RttT Initiative	Objectives	Budget
Research on effectiveness of teacher and principal preparation programs	<ul style="list-style-type: none"> • Use data and lessons learned to inform decisions about program improvements, expansion and closure 	N/A
Professional Development	<ul style="list-style-type: none"> • Create, train, and support a cadre of teacher and principal professional development leaders to establish sustainable professional development capacity statewide • Develop resources (for workshops, professional learning communities, virtual courses, webinars, etc.) to support effective professional activities, with the capacity to create additional resources as needed • Align professional development with reform initiatives in the RttT plan • Expand the online professional development infrastructure to provide accessible and high-quality online professional development for all educators throughout NC • Evaluate professional development activities to determine the impact on teaching practices and student achievement, to inform continuous improvement of professional development activities • Expand professional development opportunities for practicing principals and assistant principals 	\$33,285,045

RttT Initiative	Objectives	Budget
E. Turning Around the Lowest-Achieving Schools		
District and School Transformation support system	<ul style="list-style-type: none"> Improve performance of three groups: lowest 5% of conventional schools, schools with graduation rate below 60%, and districts with performance composites below 65% 	\$41,980,147
F. STEM		
Science, Technology, Engineering, and Mathematics (STEM) thematic schools and network	<ul style="list-style-type: none"> Develop four coordinated STEM anchor schools, each focused on a major area relevant to NC economic development Develop a network of sixteen affinity schools that will work with and learn from the four anchor schools Use the anchor schools as centers for professional development, curriculum development, technology use, and innovation to impact networks of STEM schools throughout NC lowest-achieving schools (as described in Section E) Develop business & industry support network to expand STEM opportunities for students 	\$10,146,297

G. Evaluation		
Evaluation and policy analyses	<ul style="list-style-type: none"> • Provide ongoing evaluations to inform continuous improvement of RttT initiatives • Provide summative analyses to inform future program, policy, and funding decisions • Conduct analyses of NC policies to inform the removal of policy barriers and the development of policies that support reforms 	\$9,449,409
H. Project Coordination		
RttT Program Coordination	<ul style="list-style-type: none"> • Coordinate daily implementation of NC RttT, including: <ul style="list-style-type: none"> ○ Development and modification (as needed) of a detailed scope of work and accompanying detailed budgets that comply with USED requirements ○ Development and maintenance of detailed work plans for managing each initiative ○ Establishment and maintenance of project administrative processes and structures, and meeting cadences required to manage and track progress against deliverables outlined in the scope of work ○ Communication (including reporting) with various stakeholders (at State, local, and federal levels) to ensure transparency regarding NC RttT Implementation 	\$6,947,939
RttT State Initiatives Total (includes \$34.6 million of pooled for NCEdCloud)		\$234,105,145

