

*Kick-Off Meeting*

**Towards Formation of a  
North Carolina Center for Nanotechnology (NCCN)**

10:00-11:00 AM May 14, 2001

D106 Levine Science Research Center (LSRC) Building,  
Research Drive, Duke University  
Durham, NC

*Meeting Organizer:* John Reif, CS Dept, Duke University

*Meeting Overview Slides Web URL:* <http://www.cs.duke.edu/~reif/NCCN/meeting1/NCCN.pdf>

*Meeting Web URL:* <http://www.cs.duke.edu/~reif/NCCN/meeting1/agenda.html>

*Distribution List URL:* <http://www.cs.duke.edu/~reif/NCCN/meeting1/distribution.html>

**NCCN REGISTRATION:** *Please fill in the lines below*

Name:

Title:

Department Affiliation:

University:

Surface Address:

Phone number:

Email address:

Web Page:

Research interests related to nanotechnology(1 line please):

Number of graduate students in nanotechnology related areas:

Number of postdocs in nanotechnology related areas:

Email addresses of others in nanotechnology to be invited:

**TOPIC of the NCCN Meeting:** We will discuss the possibility of establishing a NC center in nanotechnology.

**The Goal:** To gain national prominence in nanotechnology, by leveraging the strengths in nanotechnology of NC universities as well as other local institutions.

**The NCCN Concept:**

**Strategic Assets of an NCCN:**

- state of the art instrumentation,
- offices and laboratory space for research in nanotechnology,
- technical staff highly trained in support technologies,
- educational facilities providing space for lecture series, and
- a highly visible presence, displaying new results and opportunities in nanotechnology.

**Contributions of an NCCN:**

Provide to local groups and institutions working in nanotechnology:

- research collaborations with NCCN groups,
- joint contract opportunities
- access to the facilities of NCCN, shared office spaces and laboratory space (depending on contract support).
- programs for student support,
- funds for technology transfer, etc.

# **Strategic Advantages to NC that would be provided by an NCCN**

With such a NCCN facility, NC would have a much better shot at gaining *national prominence in nanotechnology*:

- The research in nanotechnology by NC institutes would be considerably enhanced.
- The pace of commercialization of NC research in nanotechnology would be considerably sped up.
- The members of NCCN would have a special advantage in obtaining competitive federal funding due to the major pre-existing infrastructure.
- The various institution's recruitment efforts would be enhanced, since affiliation with a NCCN and its shared facilities would provide a large additional incentive in recruitment.

## **Key Issues to be Resolved and Established:**

- The need for a NCCN
- The mechanism for initiating and funding a centralized NCCN facility
- The mechanism for sustaining and recapitalizing a centralized NCCN facility
- Organizational and access model for a NCCN

## **AGENDA of Kick-Off Meeting SESSION 1: 10:00-10:15 AM**

### **Overview Talks on NC Research Projects in Nanotechnology**

*Each speaker will overview research by members of their team and/or institution.*

*Speakers (Please keep to limit of 2 minutes per speaker):*

- “The Nano-Manipulator and other Nanotechnology Instrumentation”, Richard Superfine, Dept. of Physics, UNC. <http://www.physics.unc.edu/~rsuper/research/group/current.html>
- “Nano-Electronics and Other Nanotechnology Research at UNC-Charlotte”, Raphael(Ray) Tsu, Dept of Electrical and Comp. Engineering, UNC-Charlotte.
- “Nanoscale Transport and Directed Motion”, Herald Ade, Dept of Electrical and Comp. Engineering, NCSU
- Paul D. Franzon, “Molecular Electronics Research at NC State”
- Dept of EECE, NCSU. <http://www.ece.ncsu.edu/erl/moelec/>
- “An Overview of Research Projects in Nanotechnology at Duke”, John Reif, CS Dept, Duke University. <http://www.cs.duke.edu/~reif/NCCN/meeting1/Duke.html>
- “An Overview of MCNC’s Interest in Nanotechnology”, Brian Stoner, MCNC. [www.mcnc.org](http://www.mcnc.org)

**Note:** *Please realize that this meeting can not cover all such research projects within the short time available, but we need to be as inclusive as possible. There will also be a brief open discussion of further individuals and institutions to be involved.*

## **AGENDA of Kick-Off Meeting SESSION 2: 10:15-10:30 AM**

### **Open Discussion of NC Infrastructure Needs in Nanotechnology**

Existing and Needed Infrastructure:

- Instrumentation,
- Specialized Laboratories
- Collaborative Technology
- Funding avenues for research
- Location of the center
- Use of existing institutions to provide temporary space for a NCCN.

## **AGENDA of Kick-Off Meeting SESSION 3: 10:30-10:45 AM**

### **Plans for NC Technology Transfer in Nanotechnology**

*Speakers will overview (existing and future) transitions of nanoscience and nanotechnology research into commercial enterprises.*

*List of speakers:(Please keep to limit of 2 minutes per speaker)*

- Richard Superfine, Dept. of Physics, UNC
- Nick England, 3rdTech, Inc. [nick@3rdtech.com](mailto:nick@3rdtech.com)
- Paul D. Franzon, Dept of EECE, NC State
- Richard Fair, ME Dept, Engineering School, Duke University
- Clay B. Thorp, Catalysta Ventures, RTP

*This will be followed by an open discussion of funding avenues for commercialization of Nanotechnology.*

## **AGENDA of Kick-Off Meeting SESSION 4: 10:45 –11:00 AM**

### **Open Discussion of Future Plans for a NCCN**

- (1) Goals: Long Range & Immediate Goals
- (2) Funding avenues for establishing a NCCN:  
e.g., state, federal, and via local institutions or companies
- (3) Information Collection
  - What Information Needs to Be Collected ?
    - Individuals and Research Projects in NC working in Nanotechnology
    - Infrastructure Needs in Nanotechnology
    - A Strategic Plan for NCCN's Technology Transfer in NanoTechnology
  - How this Information is to be Collected
  - How this Information is to be Presented (as a Document and/or via the Web ?)
  - To whom is this Information to be presented ?
- (3) Organization of NCCN
  - Flat versus hierarchical organization
  - Teaming and team leadership
  - Assignment of tasks: (a) information collection,  
(b) document preparation,  
(c) workshop organization,  
(d) liaison with other organizations
- (4) Scheduling of Next Meetings