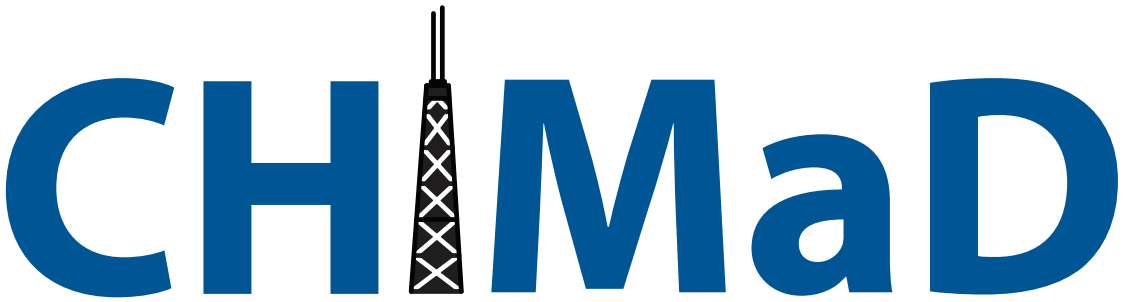


Center for Hierarchical Materials Design

PHASE FIELD METHODS VIII

Workshop

NORTHWESTERN UNIVERSITY

CHIMAD.NORTHWESTERN.EDU

April 23-25, 2019

CHiMaD | Center for Hierarchical Materials Design

Center for Hierarchical Materials Design (CHiMaD) is a NIST-sponsored center of excellence for advanced materials research focusing on developing the next generation of computational tools, databases and experimental techniques in order to enable the accelerated design of novel materials and their integration to industry, one of the primary goals of the U.S. administration's Materials Genome Initiative (MGI).

This Chicago-based consortium includes Northwestern University as the lead, University of Chicago, Argonne National Laboratory, and Northwestern-Argonne Institute for Science and Engineering (NAISE), a partnership between Northwestern University. The consortium is also partnered with QuesTek Innovations LLC, a pioneering materials design company, ASM International and Fayetteville State University.

Designing novel materials of specific properties for a particular application requires simultaneously utilizing physical theory, advanced computational methods and models, materials properties databases and complex calculations. This approach stands in contrast to the traditional trial-and-error method of materials discovery. CHiMaD aims to focus this approach on the creation of novel hierarchical materials which exploit distinct structural details at various scales, from the atomic on up, to obtain enhanced properties. The center's research focuses on both organic and inorganic advanced materials in fields as diverse as self-assembled biomaterials, smart materials for self-assembled circuit designs, organic photovoltaic materials, advanced ceramics and metal alloys.

For more information, please visit chimad.northwestern.edu

CHiMaD Contact: E. Begum Gulsoy, e-gulsoy@northwestern.edu

CHiMaD | Center for Hierarchical Materials Design

Preliminary Agenda

Phase Field Methods VIII

April 23-25, 2019

Tuesday, April 23, 2019

CHiMaD Headquarters

12:00PM – 1:00 PM	Registration & Informal Kickoff Lunch
1:00 PM – 1:15 PM	**Welcome & Goals of Workshop** *Olle Heinonen*
1:15 PM – 2:15 PM	**Phase Field and Fracture** *Blaise Bourdin*
2:15 PM – 2:30 PM	**Break**
2:30 PM – 3:30 PM	**Issues/Review of Nucleation Theory** *Tamas Pustai, Laszlo Granasy*
3:30 PM – 3:45 PM	**Goals for Breakout Sessions**
3:45 PM – 5:30 PM	**Breakout Sessions**
5:00 PM – Later	Reconvene & Beer and Dinner on our own

Wednesday, April 24, 2019

CHiMaD Headquarters

8:45 AM	Breakfast
9:00 AM – 11:00 AM	**Breakout Sessions**
11:00AM – 12:00PM	**Reconvene**
12:00 PM – 12:10PM	Group Photo
12:10 PM – 1:00PM	Lunch
1:00 PM – 3:00 PM	**Breakout Presentations**
3:00 PM – 3:15 PM	Break
3:15 PM – 4:00 PM	**Breakout Discussions**
4:00 PM – 5:00 PM	**Machine Learning, Uncertainty Quantification, and Phase Field** *Raymundo Arroyave*
5:30 PM – 7:00PM	Workshop Reception

Thursday, April 25, 2019

8:45 AM	Breakfast
9:00 AM – 9:30 AM	**Updates: Benchmark Problems, PFHub** *Olle Heinonen, Daniel Wheeler*
9:30 AM – 10:30 AM	**Annual Review of Materials Research Review of Phase Field** *Mike Tonks*
10:30 AM – 10:45 AM	Break
10:45 AM – 12:00 PM	Wrap-up discussion, what's next?
12:00 PM	Boxed Lunches to-go & Until next time!

Logistics
Phase Field Methods VIII
April 23-25, 2019

Workshop Location

CHiMaD Headquarters
Hogan Building, Suite 1160
Northwestern University
2205 Tech Drive
Evanston, IL 60208

Registration: https://victoriafonseca.wufoo.com/forms/chimad-phase-field-methods-viii-registration/

Parking Information

North Campus Parking Garage
2311 North Campus Drive
Evanston, IL, 60208

If driving, please park at the North Garage, and take a ticket as you enter. Validation tickets will be available at CHiMaD Headquarters, see *Victoria Fonseca* to obtain a validation ticket.

Hotel & Shuttle Information

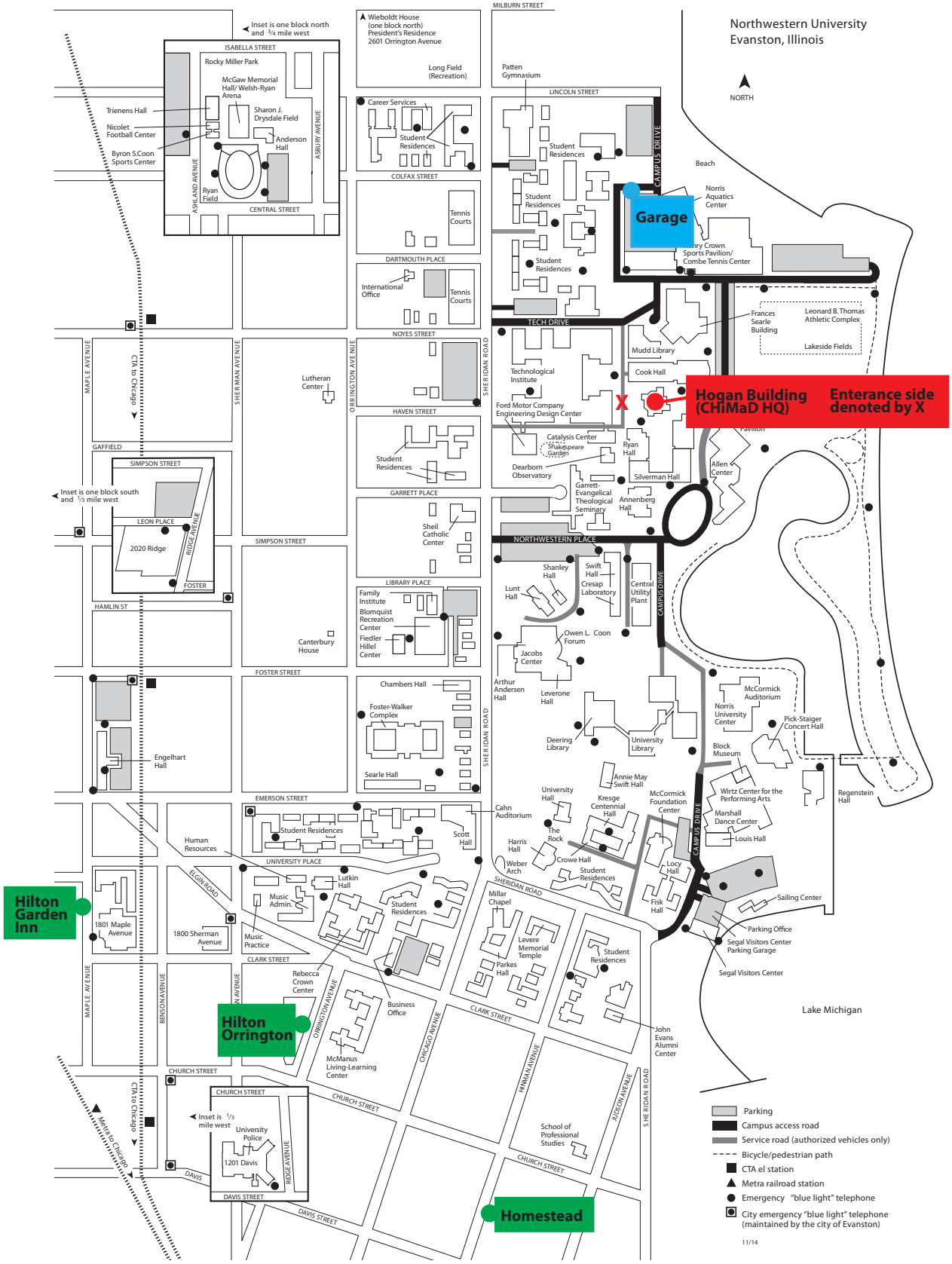
Hilton Orrington
1710 Orrington Ave
Evanston, IL 60201

Block Code: PV8
Cut-off Deadline: April 5

A shuttle is available to the workshop, but you are also welcome to walk if you prefer. Please see the map on the next page for locations.

Reimbursements

Please contact *Victoria Fonseca*, victoria.fonseca@northwestern.edu for details.


Northwestern University
Evanston, Illinois
NORTH
Garage
Hogan Building (CHiMaD HQ)
Enterance side denoted by X
X
Hilton Garden Inn
Hilton Orrington
Homestead
Lake Michigan
Inset is one block north and ¾ mile west
Inset is one block south and ⅓ mile west
Inset is ⅓ mile west
Wieboldt House (one block north) President's Residence 2601 Orrington Avenue
Long Field (Recreation)
Patten Gymnasium
Beach
Norris Aquatics Center
Henry Crown Sports Pavilion/ Combe Tennis Center
Frances Searle Building
Leonard B. Thomas Athletic Complex
Lakeside Fields
Mudd Library
Cook Hall
Technological Institute
Ford Motor Company Engineering Design Center
Catalysis Center
Shakespeare Garden
Ryan Hall
Dearborn Observatory
Silverman Hall
Allen Center
Garrett-Evangelical Theological Seminary
Annenberg Hall
Shanley Hall
Swift Hall
Lunt Hall
Cresap Laboratory
Central Utility Plant
Owen L. Coon Forum
Jacobs Center
Arthur Andersen Hall
Leverone Hall
Deering Library
University Library
McCormick Auditorium
Norris University Center
Pick-Staiger Concert Hall
Block Museum
Regenstein Hall
Annie May Swift Hall
University Hall
Kresge Centennial Hall
McCormick Foundation Center
Wirtz Center for the Performing Arts
Marshall Dance Center
Louis Hall
Cahn Auditorium
The Rock
Harris Hall
Crowe Hall
Weber Arch
Locy Hall
Fisk Hall
Sailing Center
Parking Office
Segal Visitors Center Parking Garage
Segal Visitors Center
Millar Chapel
Levere Memorial Temple
Parkes Hall
Student Residences
John Evans Alumni Center
School of Professional Studies
Career Services
Student Residences
Tennis Courts
International Office
Lutheran Center
Canterbury House
Sheil Catholic Center
Family Institute
Blomquist Recreation Center
Fiedler Hillel Center
Chambers Hall
Foster-Walker Complex
Searle Hall
Scott Hall
Human Resources
Lutkin Hall
Music Admin.
Music Practice
Rebecca Crown Center
Business Office
McManus Living-Learning Center
1801 Maple Avenue
1800 Sherman Avenue
2020 Ridge
Engelhart Hall
Rocky Miller Park
McGaw Memorial Hall/ Welsh-Ryan Arena
Sharon J. Drysdale Field
Anderson Hall
Ryan Field
Trienens Hall
Nicolet Football Center
Byron S.Coon Sports Center
University Police
1201 Davis
ISABELLA STREET
CENTRAL STREET
COLFAX STREET
DARTMOUTH PLACE
NOYES STREET
HAVEN STREET
GARRETT PLACE
LIBRARY PLACE
FOSTER STREET
EMERSON STREET
UNIVERSITY PLACE
CLARK STREET
CHURCH STREET
DAVIS STREET
GAFFIELD
SIMPSON STREET
LEON PLACE
FOSTER
HAMLIN ST
MILBURN STREET
LINCOLN STREET
TECH DRIVE
NORTHWESTERN PLACE
SHERIDAN ROAD
CAMPUS DRIVE
ASBURY AVENUE
ASHLAND AVENUE
MAPLE AVENUE
SHERMAN AVENUE
ORRINGTON AVENUE
RIDGE AVENUE
ELGIN ROAD
BENSON AVENUE
CHICAGO AVENUE
INNMAN AVENUE
JUDSON AVENUE
CTA to Chicago
Metra to Chicago
Parking
Campus access road
Service road (authorized vehicles only)
Bicycle/pedestrian path
CTA el station
Metra railroad station
Emergency "blue light" telephone
City emergency "blue light" telephone (maintained by the city of Evanston)
11/14