# **F**og **a**nd **t**urbulence **i**nteractions in the **m**arine **a**tmosphere (Fatima) – Year 5 Review

(https://efmlab.nd.edu/research/Fatima/)

**Dates:** June 11 & June 12, 2026 (Thursday and Friday)

**Venue:** Cushing Hall, Room 303 (see attached map below)

**Zoom Link (both days):** https://notredame.zoom.us/j/94372961274
Meeting ID: 943 7296 1274
*One tap mobile*
+13017158592,,94372961274# US (Washington DC)
+13052241968,,94372961274# US
*by SIP* - 94372961274@zoomcrc.com

**Host:** University of Notre Dame (POC: Joe Fernando, Cell 574-309-2345)

**Main Hotel: Fairfield by Marriott Inn & Suites,** 1220 East Angela Boulevard, South Bend Indiana, 46617) (Phone: 574-234-5510) – Breakfast Provided. Conference will also provide breakfast.

**Transportation and Events:**
Walking distance from the hotel to the conference venue

**Breakfast and Lunches:**
Conference Lunches – will be served 12:45 to 1:45 pm Thursday and Friday
Conference Breakfast – will be served from 07:30 to 8:30 am, Thursday and Friday

**Dinner:**

**At Joe Fernando's Residenc, 07:00 pm. Transportation can be arranged, if needed** (Please liaise with Mathis Chabert D'Hieres at the meeting)
Address: 51483 Megan Court, Granger, IN 46530

**Workshop Program**

**Thursday 11 June, 2026**

| **Time** | **Speaker** | **Title** |
|---|---|---|
| | | |
| **07:30-08:30** | **Breakfast** | |
| **Chair** | **Joe Fernando** | Opening Session |
| | | |
| 08:30– 08:40 | Dr. Mark McCready<br>Associate Dean of Engineering, Research, UND | Welcome Remarks |
| 08:40 – 09:00 | ONR Program Managers<br>In person: Dr. Anna Wilson<br>Others: Via zoom | ONR Programmatic Perspective |
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| **Chair** | **Qing Wang, NPS** | ~ 30 min talks |
| | | |
| 09:00 – 09:30 | H.J.S. Fernando, UND | Fatima: An Overall Progress Report & Year 5 Progress at UND |

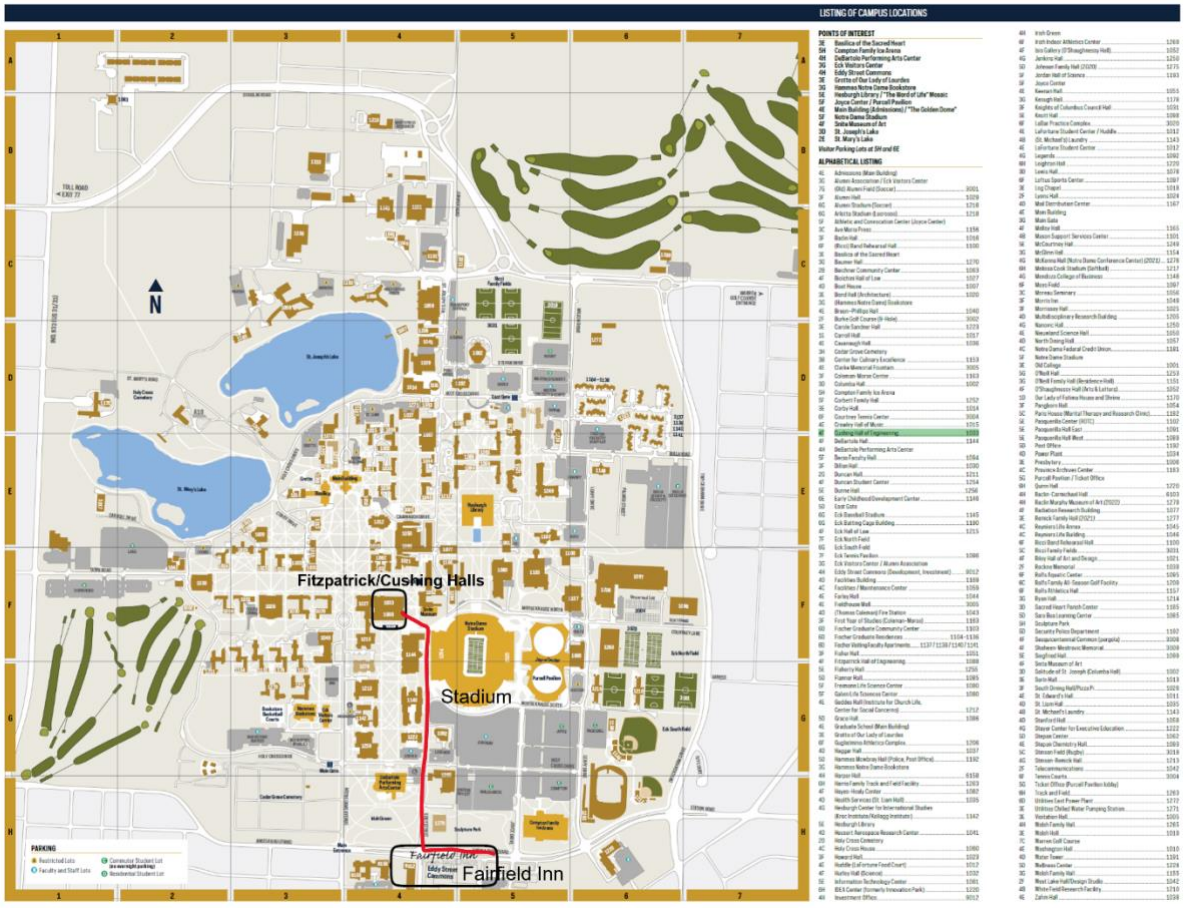
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|---|---|---|
| 09:30 – 10.00 | KI Chang, GeoSR, Republic of Korea (ROK) | ROK Contributions to the Fatima-YS Program (and, a Brief ROK Prospects of MARBLES) |
| 10:00 – 10:30 | Clive Dorman, Scripps | Synoptic Contributions to the Fog Genesis |
| | | (+ comments by Clive Dorman on AMS Special Issue) |
| 10:30 – 10:50 | Break | |
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| **Chair** | **Clive Dorman** | 30 min talks |
| | | |
| 10:50 – 11:20 | Qing Wang, NPS | Understanding air-sea interaction and fog over the ocean - results from Fatima |
| 11:20 – 11:50 | Eric Pardyjak, UU | Summary of Fatima findings related to understanding DSDs, turbulence during fog, and low-cost LWC observations |
| 11:50 – 12:20 | Lian Shen, UM (With Anup Barve) | Study of FATIMA Campaigns Through the Lens of Multi-Scale Coupled Simulations. |
| 12:20 – 12:45 | Darko Koracin (25 mins) | The marine boundary layer, clouds, and fog over the NW Atlantic, Canadian Shelf and Grand Banks revealed by the research vessel Atlantic Condor |
| | | |
| 12:45 – 01:45 | Lunch | |
| | | |
| **Chair** | **Eric Pardyjak** | 25 min talks |
| | | |
| 01:45 – 02:15 | David Richter (UND) | Turbulence-microphysics interaction in marine fog: Results from droplet-resolved LES |
| 02:15 – 02:40 | Luc Lenain (Scripps) | Investigation of Turbulence and the Fog Life-Cycle: From Micro-Physical Structure to Large Scale Dynamics |
| 02:40 – 03:05 | Anne Dowling (UND)) | Formation of Cold Patches in Coastal Yellow Sea: A precursor for fog genesis |
| 03:05 – 03:40 | Eren Gultepe (Univ Southern Illinois) | Open-Loop Generative AI Nowcasting of Dense Marine Fog: Application of Fatima data |
| 03:40 – 04:05 | Carl Schmidt (U. Alaska) | Near Surface Microphysics: Implications for Boundary Layer Conditions |
| | | |
| 04:05 – 04:25 | Break | |
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| 04:25 – 04:50 | Marylyn Dunbar (AFIT) | Optical Extinction and Modeling Radiative Properties with LEEDR of Fog Events in North Slope Alaska |
| 04:50 – 05:15 | Baban Nagare (UND) | Some Aspects of Ice-Fog Microphysics |
| 05:15 – 05:40 | Edward Creegan (ARL) | An Overview of Fatima-GB and Fatima-YS R/V Ops |
| 07:00 | Workshop Dinner | At Fernando residence (see above) |

**Friday 12 June, 2026**

| Time | Speaker | Title |
|---|---|---|
| | | |
| **7:30-8:30** | **Breakfast** | |
| **Chair** | **Edward Creegan (ARL, White Sands)** | 25 min talks, **Zoom Session** |
| 08:30 – 08:55 | Reneta Dimitrova (UND and University of Sofia) | Fog Genesis during the Evening Transition in the Fatima-GB Campaign at Sable Island: Insights from WRF-LES Studies |
| 08:55 – 09:20 | Jung-Hoon Kim (Seoul National University) | Numerical Simulation of a sea fog event over Eastern Yellow Sea with a transition of air-sea temperature difference (and notes on recent US-Korea Collaborative Research Initiative Following Fatima) |
| 09:20 – 09:45 | Ismail Gultepe, UND/OnTech | A Review of FATIMA Fog Microphysics; Successes and Challenges |

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|---|---|---|
| 09:45 – 10:10 | Gianina Giacosa (with Rachel Chang), Dalhousie U | Aerosol and Droplet Microphysics during FATIMA-YS |
| 10:10 – 10:35 | Trevor VandenBour (York) | Microphysical chemistry of fog-aerosol interactions during Fatima-GB and new observations from YS |
| 10:35 – 11:00 | Peter Taylor (York) | Case Studies of Fog on Sable Island Using the Weather Research and Forecasting (WRF) Model |
| 11:00 – 11:25 | Patrick Conry (Honeywell Inc) | Fog: Science to Technology Transitions |
| 11:25 - 12:00 | Matthis Chabert d'Hieres | Fatima-IF Study (in-person) |
| 12:00 – 1:00 | Lunch Break | |
| **Chair** | **Joe Fernando** | |
| 01:00 – 01:30 | Advisory Committee Comments | Zoom |
| 01:30 – 01:45 | Final Remarks | Joe Fernando |
| 01:45 – 02:00 | Final Remarks | Ana Wilson (ONR) |
| | Lab Tour for those interested. Scott Coppersmith will lead it | |

## Map and Instructions:




## To get to Cushing Hall 303:

1. Enter the doors to Fitzpatrick Hall which is diagonal from the stadium (See the picture of entrance; If construction is ongoing, please maneuver around it).
2. Take the elevator to the third floor.
3. Walk all the way straight down the hall from the elevator and turn left at the stairs.
4. Cushing Hall 303 will be the lecture hall on the right

