

# Predeparture Meeting 1

## The Basics, Fun Facts, Immediate Issues

2cn2u.cl Biomedical Imaging in Chile

Charles A. DiMarzio  
Northeastern University

March 2023

- Education
  - 1969: BS in Engineering Physics, University of Maine
  - 1973: MS in Physics, WPI
  - 1996: Ph.D. in Electrical Engineering, Northeastern
- Employment
  - 1973 — 1987: Raytheon Company (Laser Radar)
  - 1983 — 1987: Northeastern (Part–Time Lecturer)
  - 1987 — 2000: Northeastern (Research Scientist)
  - 2000 — Present: Northeastern ECE Faculty (MIE, BioE)
  - 2014 — 2016: Associate Chair of ECE
  - 2014 — 2020: Topical Editor, *Optics Letters*
- Outside Activities
  - Skiing, Road Biking

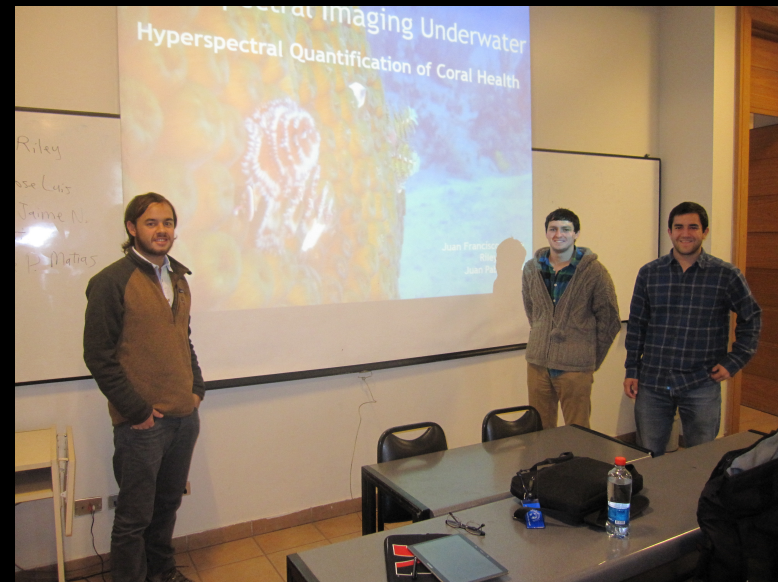
# My Research and Teaching

- Current Research
  - Structured Illumination Microscopy (Dermatology) (NSF)
  - Lidar in Adverse Weather (Draper)
  - Collagen Fibril Growth and Orientation (Ruberti: NIH)
  - Light and Sound in Medical Imaging
- Academic Year Teaching
  - Optics for Engineers (EECE4646 and EECE7105)
  - Biomedical Optics (Team EECE5648+?)
  - Fundamentals of Electronics (EECE2412)
  - Circuits and Signals (EECE2150)
  - Capstone Design

# My Dialogues History



Taiwan  
Biomedical Optics, 2014



Chile  
Hyperspectral Imaging, 2015  
Biomedical Imaging, 2017,8,9

# Eric: Background

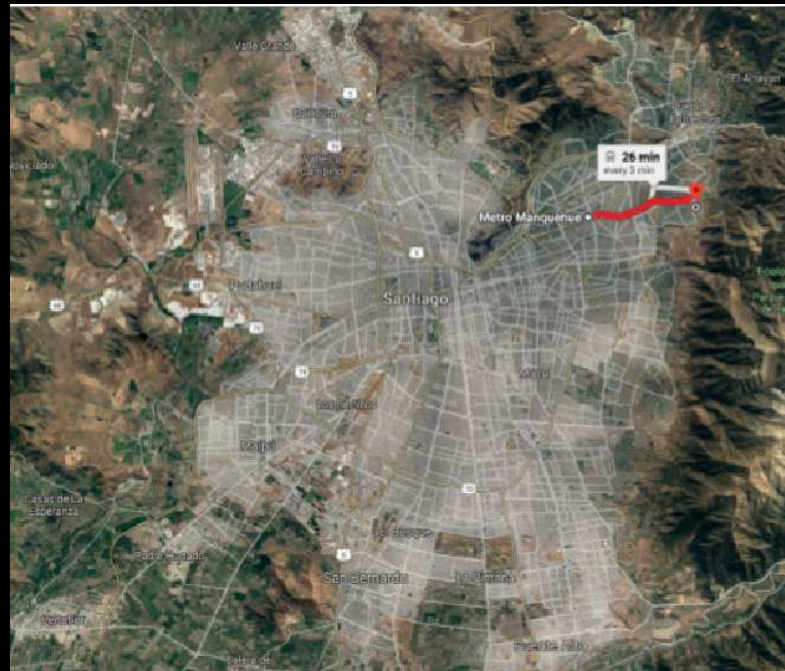
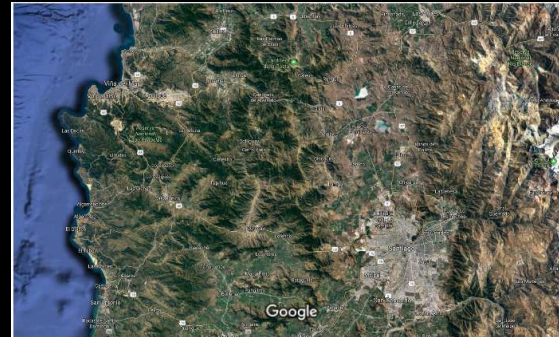
- From: North Andover, Massachusetts
- Undergrad: Worcester Polytechnic Institute, Biomedical Engineering
  - Focus: Acquiring biological signals, tissue engineering, small amount of microscopy
- Grad School: PhD, Electrical Engineering
  - Focus: Microscopy System Design and Development, collagen imaging (hopefully)
- Fun Things: Tennis, rock climbing, basketball, soccer, video games.

- MATLAB
  - I have used MATLAB for about 6 years now.
  - I am certainly no expert, but I know most of the tricks and what it can/cannot do.
  - It's a great way to start your coding journey if you have not started yet.
- General imaging background
  - I have worked with almost all the modalities we cover and am familiar with them all.

# Teaching Team

- Northeastern
  - Grand Poohbah: Chuck DiMarzio
  - Assistant Deputy Poohbah: Eric Hall
- UAndes
  - Program Coordinator: Josefina Maria Vicuña Vicuña
  - Student Coordinator: TBD
  - Image Processing: Prof. José Delpiano
  - Chilean Culture: TBD
  - Spanish Language: Prof. Daisy Bravo

# Chile!



What comes to mind when you think of Chile?



# Typical Day

- Breakfast and Commuting
- Biomedical Imaging Class 9:00-11:30
- Lunch and Free Time
- Chilean Culture Class
- Workshop?
- Optional Excursions
- Occasional Culture Excursions
- Commuting and Dinner

# It's About Dialogues

- Dialogue Means Both Ways
- There are Multiple Dialogues
  - Student–Student
  - Student–Faculty
  - Student–Host Family
  - Student–Community
  - Faculty–Faculty
  - Faculty–Community
- Be an Active Participant
- Remember “Cultural Humility”
- Be Careful about Assumptions and Generalizations

# Expectations

- First Goal is Education: Imaging and Culture
- Second, a Chance to Talk about Courses and Careers
- Responsibility: Take Care of Yourself and Others
- Independence
- Communication in All Directions
- Fun
- Expect the Unexpected; Syllabus, Schedule, Excursion Changes. Metro Breakdowns, Phone Failures, Weather Problems.

- Travel Registry <http://myneu.neu.edu>
- Passports and Visas (No Visa for US, some others)
- Medical, Dental, *etc.*; *e.g.* Glasses
- Mention Medical Conditions, *etc.*
- Get Prescriptions and Other Meds (Copy of Prescriptions)
- Banking, Transaction Fees, Limits, Travel Notification  
Bank of America  $\longleftrightarrow$  ScotiaBank
- Bring Some Pesos (850CLP $\approx$ \$1.00) (Plan Ahead)
- Phone Required (US and/or CL, Not on Internet)
- Laptop with Matlab Usable without Internet Connection
- Contact Info Now: Chuck 617-755-4374, Eric 978-852-5621

- Arrival Sunday 7 May 2023 7ish AM  
US Departure Saturday PM
- Departure Saturday 10 June 2023 7ish PM  
US Arrival Sunday AM
- Suggested Flights (We Will Arrange Ground Transport)

DL147: ATL—SCL	AA957: MIA—SCL	UA847: IAH—SCL
9:50p—7:00a	11:25p—7:40a	8:05—6:20a
DL146: SCL—ATL	AA912: SCL—MIA	UA846: SCL—IAH
10:30p—8:15a	8:55p—5:35a	11:30p—8:00a
- Alternate Flights
  - You Must Arrive by Sunday, Leave After Friday
  - Ground Transport on Your Own (but ask for advice)

- Homestays in/near Las Condes
- Vendor: Andes Living (Maria Elena Blanch)
- Meals, WiFi, Laundry, *etc.*
- Special considerations: Smoking, Food Issues, Pets, *etc.*
- Close to el Metro (the subway) and/or el Micro (the bus)
- We provide *BiP!* (beep) card with 40.000 CLP. You can refill.

# Some Logistics Notes

- Time Zone: (Easy this year) Standard Time: GMT-4.  
+1 for DST Until 2 April 2023. Compare Boston GMT-5+1
- Electricity: 240V, 50Hz, Almost-European Plug
- Weather: From Freezing to Shirt-Sleeves  
Expect a Few Rainy Days
- Air Quality: Expect Some Air Pollution
- Water: It won't hurt you but it may not taste very good.
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- Unfortunately, the same is true of the beer.



# Chuck's Bad-Beer Tour



- Expect Bread (Pan)
  - Expect Avocados (Palta)
  - Four Meals a Day
    - Breakfast (Desayuno) at Home
    - Lunch (Almuerzo) at School, Noonish
    - Once, on your own
    - Dinner (Cena) maybe 8 or 9 PM
- \* If you are going to miss dinner or be late be sure to tell your host family

# Clothing

- Dress for class as you would at NU (Maybe a bit warmer)
- Bring warm clothes. Chilean homes are often kept cool
- Bring one nice casual outfit
- Bring some clothes you don't mind getting dirty; you'll probably be sandboarding and riding a horse
- Bring good walking shoes
- There are plenty of stores for anything you forget (Ask your classmates what the good ones are)

# Medicine and Personal Items

- There are drug stores everywhere
- Medications and personal items are in different stores
- You may not find the brands you know  
(I had trouble finding Tylenol)
- Even the ones you know may be different

# Safety and Security

- It's a Safe City
- But of Course, Be Careful
- Transit is Very Crowded: Keep Valuables Secure
- Travel in Groups at Night
- Travel in Known Areas
- There are Frequent Political Protests: Avoid Them
- There is Potential for Earthquakes
- Overnight Travel is Not Allowed
- Driving is Not Allowed

# Random Facts

- Names: Verònica Michelle Bachelet Jeria = Dr. Bachelet = Michelle Bachelet
- Time: Both 24-hour and AM/PM are used — diecinueve y media = diez y nueve y media (19:30) = siete y media de la tarde (7:30pm)
- Numbers: Swap comma and period as 40.000,00
- Ground Floor is usually “Zero”
- la Alameda
- Food words are hard: What’s a Barros Jarpa?

# Future Meetings

- Meeting 2
  - Tuesday 28 March 6:00 PM, 302ST
  - Some Thoughts on Culture
  - Matlab Tutorial
- Meeting 3
  - Wednesday 12 April 6:00PM, 302ST
  - Outbound Travel Coordination
  - Local Transportation
  - First Day of Classes
  - Review of Logistics

# Homework

- Plan your travel. Email me flight numbers and times.
- Have Matlab ready to go on your laptop.  
Bring to next meeting.



# Questions?

