

DUNLAP INSTITUTE SUMMER SCHOOL 2019
Introduction to Astronomical Instrumentation
7 – 12 July 2019
Toronto, Ontario, Canada

| | Monday | Tuesday | Wednesday | Thursday | Friday | | | | |
|------------------|--|--|---------------------------------------|--|--|---------------------------|------------------------|------------------------|---------------------------|
| MORNING | Intro to Optics | Properties & Detection of Light: X-Ray | Spectroscopy | OIR Telescope Fundamentals | Radio Telescope Fundamentals: Interferometry | | | | |
| | <i>BREAK</i> | | | | | | | | |
| | Properties & Detection of Light: Optical | Properties & Detection of Light: Microwave / Radio | Adaptive Optics <i>Evaluation</i> | OIR Design Consideration <i>Group Photo</i> | Radio Design Considerations | | | | |
| | <i>LUNCH</i> | <i>Prof. Dev. Lunch</i> | <i>LUNCH</i> | <i>LUNCH</i> | <i>LUNCH</i> | | | | |
| AFTERNOON | Optical Design Lab | X-Ray Lab (A) | Radio Lab (B) | Radio Lab (A) | X-Ray Lab (B) | Wave-front Sensor Lab (A) | Interferometry Lab (B) | Interferometry Lab (A) | Wave-front Sensor Lab (B) |
| | <i>BREAK</i> | | | | | | | | |
| | Optical Design Lab | X-Ray Lab (A) | Radio Lab (B) | Radio Lab (A) | X-Ray Lab (B) | Wave-front Sensor Lab (A) | Interferometry Lab (B) | Interferometry Lab (A) | Wave-front Sensor Lab (B) |
| | | | Field Trip – David Dunlap Observatory | | | | | | |

Room Assignments:

- Lectures Monday to Friday in AB107
- Optical Design lab in SS561
- X-Ray lab in MY380
- Radio lab in AB88
- Wavefront Sensor lab in MP 127
- Interferometry lab in AB88
- Reception/Registration in lobby of New College, 40 Wilcocks Street
- Professional Development Lunch in Main Activity Hall, Multi-faith Center, Koffler House

Room Key

AB = [Astronomy & Astrophysics Building](#), 50 St. George Street
KP = [Koffler House](#), 569 Spadina Crescent
NC = [New College](#), 40 Willcocks Street
SS = [Sidney Smith Hall](#), 100 St. George Street
MY = [Myhal Centre for Engineering](#), 55 St. George Street
MP = [McLennan Physical Laboratories](#), 255 Huron Street

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Day 0: Sunday, 7 July 2019

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|---------|---------|------|-------------------------|------------|---------------------|--------------|----|
| 4:00 pm | 5:30 pm | 1:30 | Welcoming /Registration | | Sivanandam Gaensler | | NC |

Day 1: 8 July 2018, 8:45 am – 5:00 pm

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|----------|----------|------|--|------------|-------------------|--------------|---------------|
| 8:45 am | 9:00 am | 0:15 | Welcome | | Gaensler | | AB107 |
| 9:00 am | 10:20 am | 1:20 | Intro to Optics | Lecture | van Belle | | AB107 |
| 10:20 am | 10:40 am | 0:20 | <i>COFFEE BREAK</i> | | | | Outside AB107 |
| 10:40 am | 12:00 pm | 1:20 | Properties & Detection of Light: Optical | Lecture | Mazin | | AB107 |
| 12:00 pm | 1:30 pm | 1:30 | <i>LUNCH</i> | | | | NC |
| 1:30 pm | 3:15 pm | 1:45 | Optical Design Lab | Lab | Sivanandam | Chen, Meyer | SS561 |
| 3:15 pm | 3:30 pm | 0:15 | <i>BREAK</i> | | | | |
| 3:30 pm | 5:15 pm | 1:45 | Optical Design Lab | Lab | Sivanandam | Chen, Meyer | SS561 |

Day 2: Tuesday, 9 July 2019, 8:50 am – 5:30 pm

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|----------|----------|------|--|------------|-------------------|----------------------------|---------------|
| 8:50 am | 9:00 am | 0:10 | Announcements | | Sivanandam | | AB107 |
| 9:00 am | 10:20 am | 1:20 | Properties & Detection of Light: X-ray | Lecture | Flanagan | | AB107 |
| 10:20 am | 10:40 am | 0:20 | <i>COFFEE BREAK</i> | | | | Outside AB107 |
| 10:40 am | 12:00 pm | 1:20 | Properties & Detection of Light: Microwave / Radio | Lecture | Vanderlinde | | AB107 |
| 12:00 pm | 1:30 pm | 1:30 | <i>Professional Development LUNCH</i> | | | | KP |
| 1:45 pm | 3:30 pm | 1:45 | X-Ray Lab (Group A) | Lab | Alexandroff/ Reid | Nagy, Gill | MY380 |
| | | | Radio Lab (Group B) | | Ng | Rahman, MacKay, Cassanelli | AB88 |
| 3:30 pm | 3:45 pm | 0:15 | <i>COFFEE BREAK</i> | | | | Outside AB88 |
| 3:45 pm | 5:30 pm | 1:45 | X-Ray Lab (Group A) | Lab | Alexandroff/ Reid | Nagy, Gill | MY380 |
| | | | Radio Lab (Group B) | | Ng | Rahman, MacKay, Cassanelli | AB88 |

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Day 3: Wednesday, 10 July 2019, 8:50 am – 11:30 pm

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|---|----------|------|--|------------|---------------------------|----------------------------------|---------------|
| 8:50 am | 9:00 am | 0:10 | Announcements | | Sivanandam | | AB107 |
| 9:00 am | 10:20 am | 1:20 | Spectroscopy | Lecture | Ramsay | | AB107 |
| 10:20 am | 10:40 am | 0:20 | <i>COFFEE BREAK</i> | | | | Outside AB107 |
| 10:40 am | 12:00 pm | 1:20 | Adaptive Optics | Lecture | Baranec | | AB107 |
| 12:00 pm | 12:10 pm | 0:10 | <i>Evaluation Part 1</i> | | | | AB107 |
| 12:00 pm | 1:30 pm | 1:30 | <i>LUNCH</i> | | | | NC |
| 1:30 pm | 3:15 pm | 1:45 | X-Ray Lab (Group B) | Lab | Alexandroff/ Reid/Nagy | Nagy, Gill | MY380 |
| | | | Radio Lab (Group A) | | Ng | Rahman, MacKay, Cassanelli | AB88 |
| 3:15 pm | 3:30 pm | 0:15 | <i>COFFEE BREAK</i> | | | | Outside AB88 |
| 3:30 pm | 5:15 pm | 1:45 | X-Ray Lab (Group B) | Lab | Alexandroff/ Reid/Nagy | Nagy, Gill | MY380 |
| | | | Radio Lab (Group A) | | Ng | Rahman, MacKay, Cassanelli | AB88 |
| 5:30 pm | 6:30 pm | 1:00 | <i>DINNER</i> | | | | NC |
| 6:45 pm | 11:30 pm | | Star Viewing at David Dunlap Observatory | Field Trip | Jaremus, | | Outside AB |
| Meet at 6:45pm in front of AB on 2 Russell St. | | | | | | | |

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Day 4: Thursday, 11 July 2019, 9:00 am – 5:15 pm

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|----------|----------|------|--------------------------------|------------|-------------------|-----------------------|---------------|
| 9:00 am | 10:20 am | 1:20 | OIR Telescope Fundamentals | Lecture | Sivanandam | | AB107 |
| 10:20 am | 10:40 am | 0:20 | <i>COFFEE BREAK</i> | | | | Outside AB107 |
| 10:40 am | 12:00 pm | 1:20 | OIR Design Considerations | Lecture | Kleinman | | AB107 |
| 12:00 pm | 12:05 pm | | <i>Group Photo</i> | | MacSween | | AB107 |
| 12:05 pm | 1:30 pm | 1:25 | <i>LUNCH</i> | | | | NC |
| 1:30 pm | 3:15 pm | 1:45 | Wavefront Sensor Lab (Group A) | Lab | Ziegler | Butko/ Sivanandam | MP127 |
| | | | Interferometry Lab (Group B) | | Cassanelli | Rahman, MacKay, Ng | AB88 |
| 3:15 pm | 3:30 pm | 0:15 | <i>COFFEE BREAK</i> | | | | Outside AB88 |
| 3:30 pm | 5:15 pm | 1:45 | Wavefront Sensor Lab (Group A) | Lab | Ziegler | Butko/ Sivanandam | MP12 |
| | | | Interferometry Lab (Group B) | | Cassanelli | Rahman, MacKay, Ng | AB88 |

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Day 5: Friday, 12 July 2019, 9:00 am – 6:00 pm

| Start | End | Time | Topic | Activities | Contact / Speaker | Facilitators | Rm |
|----------|----------|------|--|------------|-------------------|----------------------|-----------------------|
| 9:00 am | 10:20 am | 1:20 | Radio Telescope Fundamentals: Interferometry | Lecture | Perley | | AB 107 |
| 10:20 am | 10:40 am | 0:20 | <i>COFFEE BREAK</i> | | | | Outside AB107 |
| 10:40 am | 12:00 pm | 1:20 | Radio Design Consideration | Lecture | Gaensler | | AB107 |
| 12:00 pm | 1:00 pm | 1:00 | <i>LUNCH</i> | | | | NC |
| 1:00 pm | 2:45 pm | 1:45 | Wavefront Sensor Lab (Group B) | Lab | Ziegler | Butko/ Sivanandam | MP 127 |
| | | | Interferometry Lab (Group A) | | Cassanelli | | Rahman, MacKay, Ng |
| 2:45 pm | 3:00 pm | 0:15 | <i>COFFEE BREAK</i> | | | | Outside AB88 |
| 3:00 pm | 4:45 pm | 1:45 | Wavefront Sensor Lab (Group B) | Lab | Ziegler | Butko/ Sivanandam | MP127 |
| | | | Interferometry Lab (Group A) | | Cassanelli | | Rahman, MacKay, Ng |
| 4:45 pm | 5:15 pm | 0:30 | Synthesis & Final Evaluation | | Gaensler | Sivanandam | AB107 |
| 5:30 pm | 6:15 pm | 0:45 | <i>COOKIES & TEA</i> | | | | Astro Lounge AB 201 |

Last Updated: July 5, 2019