

# U24 SUMMER SCHOOL - TENTATIVE CURRICULUM SCHEDULE

<u>HANDS ON! THE NEUROPHYSIOLOGY OF SOFT TISSUE MANIPULATION IN MUSCULOSKELETAL PAIN CONDITIONS</u> Indiana University, School of Health & Human Sciences, 1050 Wishard Blvd, Indianapolis, IN 46202 June 20-24 <sup>th</sup> , 2023, Indianapolis, IN				
TIME	ACTIVITY	LOCATION BLDG/RM	SPEAKER	PRESENTATION TITLE
DAY 1. TUESDAY, JUNE 20, 2023. The NeuronS_ MATTR STM Research Network – Summer School Kickoff				
4:00	Registration Check-In	RG Foyer Commons	Reception Table Sign-In Light snacks	
5:00	Welcome	RG2152	Terry Loghmani	<i>Welcome, Course Overview, Introductions</i>
6:00	NIH Perspective on FBM (Zoom)	RG2152	NIH Alex Tuttle	<i>NCCIH Research Networks to Promote Understandings of Neural Mechanisms of Force-Based Manipulations</i>
6:30	NeuronS_ MATTR Perspective	RG2152	Ellen Lumpkin	<i>The Power of Touch</i>
7:00	Opening Dinner Buffet	RG Foyer	Sahm’s Catering	
DAY 2. WEDNESDAY, JUNE 21, 2023. Frameworks for Soft Tissue Manipulation (STM) Approaches – Clinical Focus				
8:00	Check-In	RG2	Commons - Light breakfast Gathering - Sign-In	
8:30	Session 1	TOPIC: STM Overview		
8:30	STM Introduction	RG2152	Geoff Bove / Terry Loghmani	<i>Introduction to Soft Tissue Manipulation, Part I: Focus on Intervention Techniques</i>
9:00	STM LAB	RG2152	Geoff Bove / Terry Loghmani	Part I: Lab
10:30	BREAK	RG2 Commons – Light snacks		
10:45	Session 2	TOPIC: STM Mechanisms & Models		
10:45	DAY 2 FEATURED SPEAKER	RG2152	Mary Barbe	<i>Overview of Possible STM Mechanisms and Research Animal Models for Studying its Effects: Focus on Repetitive Strain Injury</i>
Noon	LUNCH	RG Foyer – Noodles Buffet		
Noon	<i>Meet the Speakers</i>	RG2 Focus Rooms	Mary Barbe & Geoff Bove	
1:00	Session 3	TOPIC: STM Techniques		

## U24 SUMMER SCHOOL - TENTATIVE CURRICULUM SCHEDULE

1:00	IASTM	RG2152	Mike Ploski	<i>Instrument-Assisted Soft Tissue Manipulation (IASTM): Applications in Myotendinosis</i>
1:45	STM Demo	RG2152	Geoff Bove / Terry Loghmani	<i>Introduction to Soft Tissue Manipulation, Part II: Focus on Palpation Exam</i>
2:15	STM LAB	RG2152	Geoff Bove / Terry Loghmani	Part II: Lab
3:15	BREAK	RG2 Commons – Light Snacks		
3:30	Session 4	TOPIC: Research Perspectives		
3:30	Research & Fascia Overview	RG2152	Eric Jacobson	<i>Manual Therapy Research Problems &amp; Fascia – An Overview</i>
4:30	Diversity in Science	RG2152	Mary Barbe	<i>“NIH Initiatives to Promote Diversity in Science, PowerPoint by Kristy Nicks, PhD, Program Officer at NIAM”</i>
5:00	Student Dinner Discussion	RG Foyer RG2152	Naf Naf Mediterranean Buffet. <i>Belonging in Science – Perspectives on Diversity, Inclusion, Equity, Belonging, &amp; Justice</i> – Mary Barbe, Facilitator	
6:30	U24 Team Dinner	St. Joseph’s Brewery (540 N. College Ave, 46202) In the “Loft”		
DAY 3. THURSDAY, JUNE 22, 2023. Biological & Physiological Mechanisms of STM – Basic Science Focus				
8:00	Check-In	RG2	Commons - Light breakfast Gathering - Sign-In	
8:30	Session 1	TOPIC: Mechanobiology of STM		
8:30	DAY 3 FEATURED SPEAKER 1. Aging	RG2152	Esther Dupont-Versteegden	<i>Massage as a Mechanotherapy for Skeletal Muscle Disorders</i>
9:30	DAY 3 FEATURED SPEAKER 2. Bone & Inflammation	RG2152	Jonathan Lowery	<i>STM to the Rescue: A Potential Conservative Approach to Mitigating Inflammation and Bone Loss</i>
10:15	BREAK	RG2 Commons – Light snacks		
10:30	Session 2	TOPIC: Neurophysiology & Modulation of Touch Perception		
10:30	DAY 3 FEATURED SPEAKER 3. Peripheral Touch	RG2152	Ellen Lumpkin	<i>Animal Models &amp; Receptors: Peripheral Mechanisms of Touch</i>
11:30	DAY 3 FEATURED SPEAKER 4.	RG2152	Håkan Olausson	<i>Slow touch and fast pain fibers; their roles in pleasure and pain</i>

## U24 SUMMER SCHOOL - TENTATIVE CURRICULUM SCHEDULE

	Central Mechanisms of Touch Perception			
12:30	LUNCH	RG Foyer – Nameless Mexican Buffet		
12:45	<i>Meet the Speakers</i>	RG2 Focus Rooms	Esther Dupont-Versteegden, Jonathan Lowery, Ellen Lumpkin, Eric Jacobson	
1:30	Session 3	TOPIC: Contextual Factors of Touch		
1:30	DAY 3 FEATURED SPEAKER 5. Context Factors	RG2152	Laura Case	<i>Touch in Context: Cognitive and Emotional Modulation of Touch Perception</i>
2:30	STM LAB (Attendees Only - DEMO)	RG2152	Håkan Olausson/ Laura Case	C-tactile Research - Lab
3:45	BREAK	RG2 Commons – Light Snacks		
4:00	Session 4	TOPIC: Genetics of STM & Touch		
4:00	DAY 3 FEATURED SPEAKER 6. Genetics & Touch	RG2152	Victoria Abraira	<i>Wired for Touch: how spinal cord neurons scale our sensory experiences</i>
5:00	Wrap-Up	RG2152	Terry Loghmani	
5:00	<i>Meet the Speakers</i>	RG2 Focus Rooms	Drs. Håkan Olausson, Laura Case, Victoria Abraira	
5:15	Wellness in Science Discussion	“Wellness in the Workplace: Surviving and Thriving in a Challenging Climate” - Laura Case, Facilitator		
6:00	Student Night Out	(OPTIONAL) Downtown at the Garage in Bottle Works district		
DAY 4. FRIDAY, JUNE 23, 2023. Technologies & Methodologies for Soft Tissue Measurement & Imaging – Engineering Focus				
8:00	Check-In	RG2	Commons - Light breakfast Gathering - Sign-In	
8:30	Session 1	TOPIC: Soft Tissue Quality & Mobility Assessment		
8:30	DIC	RG2152	Anika Kao/ Greg Gerling/ Zach Landsman	<i>Assessment of soft tissue mobility with digital image correlation</i>
9:15	Movement Tracking	RG2152	Anika Kao/ Greg Gerling/ Zach Landsman	<i>Tracking skin surfaces, body member movements, and object contact</i>

## U24 SUMMER SCHOOL - TENTATIVE CURRICULUM SCHEDULE

10:00	BREAK	RG 2 Commons – Light snacks		
10:15	Session 2	TOPIC: Engineering Modeling Approaches		
10:15	QSTM	RG2152	Abhinaba Bhattacharjee	Digital Manual Therapy: Advancing Towards Precision Rehabilitation with Assistive Diagnostics
11:00	DAY 4 FEATURED SPEAKER 1. Biomechanics modeling	RG2152	Arin Ellingson	Imaging and Modeling Approaches to Evaluate Musculoskeletal Pathomechanics
NOON	LUNCH	RG Foyer – Panera Box Lunches		
12:15	Meet the Speakers	RG2 Focus Rooms	Arin Ellingson, Greg Gerling	
1:00	Session 3	TOPIC: Imaging & Measurement of Soft Tissue Structure & Function in Response to STM		
1:00	DAY 4 FEATURED SPEAKER 2. Soft Tissue Modeling	RG2152	Greg Gerling	Physics based models of skin, soft tissues, and peripheral neurons
1:45	US Elastography	RG2152	Mark Holland	Ultrasound Shear wave Elastography Musculoskeletal Imaging Applications
3:15	BREAK	RG 2 Commons – Light snacks		
3:30	Session 4	TOPIC: Integration of STM Concepts in Research.		
3:30	DAY 4 FEATURED SPEAKER 3. STM Taxonomy & Terminology	RG2152	Chad Cook	“You say massage, I say mobilization” Frameworks & Terminology for Manual Therapy.
4:15	PANEL DISCUSSION	RG2152	Ellen Lumpkin Chad Cook Arin Ellingson	Panel Discussion: How can discovery in touch research optimize manual therapy practice? - Top Research Priorities
5:00	Wrap-Up	RG2152	Terry Loghmani	
5:00	Meet the Speakers	RG2 Focus Rooms	Chad Cook, Mark Holland	
5:15	Guided Walk	RG Foyer	(Optional) Guided walk to The AMP@16Tech for dinner reception. Get exercise!	

## U24 SUMMER SCHOOL - TENTATIVE CURRICULUM SCHEDULE

6:00	Dinner Buffet	AMP @ 16 Tech (1220 Waterway Blvd, Indianapolis, IN 46202)		
DAY 5. SATURDAY, JUNE 24, 2023. Setting the Course for STM Research – Translational Focus				
8:00	Check-In	RG2	Commons - Light breakfast Gathering - Sign-In	
8:30	Session 1	TOPIC: STM Clinical Trials Research		
8:30	DAY 5 FEATURED SPEAKER 1. Designing Robust Studies	RG2152	NIH Alex Tuttle	How to design robust force-based manipulation mechanistic research and clinical trial designs.
10:00	BREAK	RG 2 Commons – Light snacks		
10:15	Session 2	TOPIC: Future Directions		
10:15	Funding & Dissemination	RG2152	NIH Alex Tuttle	High Program Priority Initiatives for Basic and Mechanistic Studies of Force-based Manipulation Research
10:45	Future Directions	RG2152	Ellen Lumpkin	Where Do We Go from Here? - Perspectives on Future Research Priorities & Forming a Research Consortium
11:45	Wrap-Up	RG2152	Terry Loghmani	Online Course Evaluations
Noon	Dismissal			
KEY				
LOCATION KEY: RG=Health Sciences Bldg, 1050 Wishard Blvd, Indpls, IN 46202				