

## UPMC Sports Medicine

Sports Medicine Concussion Center  
3200 S. Water St.  
Pittsburgh, PA 15203

### Emerging Frontiers in Concussion:

*Advancements in Assessment,  
Management, and Rehabilitation*

**JUNE 7-9, 2013**

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## Emerging Frontiers in Concussion: *Advancements in Assessment, Management, and Rehabilitation*

UPMC Center for Sports Medicine & Omni William Penn Hotel • Pittsburgh, PA

**UPMC** LIFE  
CHANGING  
MEDICINE

Sponsored by:

University of Pittsburgh School of Medicine  
Center for Continuing Education  
in the Health Sciences

and

University of Pittsburgh  
Department of Orthopaedic Surgery  
UPMC Sports Medicine

Western Psychiatric Institute and Clinic of UPMC

### Course Directors

**Michael W. Collins, PhD**

Clinical and Executive Director  
UPMC Sports Medicine Concussion Program

**Anthony P. Kontos, PhD**

Assistant Director of Research  
UPMC Sports Medicine Concussion Program

**Joseph Maroon, MD**

Vice Chair, Department of Neurological Surgery  
University of Pittsburgh School of Medicine

**Freddie Fu, MD**

Chair, Department of Orthopaedic Surgery  
University of Pittsburgh School of Medicine

UPMC Sports Medicine

## Intent and Objectives

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**Emerging Frontiers in Concussion** will focus on emerging, evidence-based trends in concussion from on-field assessments to active clinical treatment pathways. At the conclusion of the program, participants should be able to:

- Identify advances in the pathophysiology of concussion.
- Understand comprehensive and cutting-edge imaging; and neurocognitive, vestibular-ocular, and other diagnostic assessments.
- Classify acute and subacute prognostic factors for recovery.
- Recognize active, interdisciplinary treatment and rehabilitation approaches to concussion and post-concussion syndrome including academic accommodations; exertion protocols; medications; and cognitive, physical, vestibular, and vision therapies.

## Who Should Attend

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This conference is designed for physicians, neuropsychologists, athletic trainers, physical therapists, and other allied health professionals (RN, PA, NP), as well as students and researchers involved or interested in concussion.

## Conference Location

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The meeting will be held at the **UPMC Center for Sports Medicine**, 3200 S. Water St., Pittsburgh, PA, 15203 on day one, and at the **Omni William Penn Hotel**, 530 William Penn Place, Pittsburgh, PA 15219 on days two and three.

## Special Needs

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Participation by all individuals is encouraged. Advance notification of any special needs will help us provide better service. Please notify us of your needs by **May 17** by calling (412) 647-8232.

## Continuing Education Credit

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The University of Pittsburgh School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The University of Pittsburgh School of Medicine designates this live activity for a maximum of **12.5 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Certified Athletic Trainers:** UPMC Center for Sports Medicine is recognized by the Board of Certification, Inc. to offer continuing education for Certified Athletic Trainers. This program has been approved for a maximum of **12.5** hours of Category A continuing education. Certified Athletic Trainers should claim only those hours actually spent participating in the continuing education activity. BOC Approved Provider Number: P2760.

**Physical Therapists:** An application is pending approval with the Pennsylvania State Board of Physical Therapy.

**Psychologists:** Western Psychiatric Institute and Clinic of UPMC is approved by the American Psychological Association to sponsor continuing education credit for psychologists. Western Psychiatric Institute and Clinic of UPMC maintains responsibility for this program and its content. This program is being offered for **12.5** continuing education credits.

Other health care professionals are awarded **1.2** continuing education units (CEU's) which are equal to **12.5** contact hours.

## Accommodations

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For hotel reservations, contact the Omni William Penn Hotel and ask for the *UPMC Sports Medicine Concussion Conference* room block before **Friday, May 17** or go to <http://tinyurl.com/ConcussionConference> to book your room.

Omni William Penn Hotel  
530 William Penn Place  
Pittsburgh, PA 15219  
Phone: (412) 281-7100

## Day 1 Schedule — Friday, June 7, 2013

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UPMC Center for Sports Medicine, 3200 S. Water St., Pittsburgh, PA 15203

5:00 PM **Opening Remarks**  
*Freddie Fu, MD; Joseph Maroon, MD; Michael W. Collins, PhD;  
Anthony P. Kontos, PhD*

5:15 – 7:00 PM **Cocktail Reception and Tour of UPMC Center for Sports Medicine and Concussion Clinic**

## Day 2 Schedule — Saturday, June 8, 2013

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Omni William Penn Hotel, 530 William Penn Place, Pittsburgh, PA 15219

7:00 AM **Registration and Continental Breakfast**

7:30 AM **Opening Remarks**  
*Freddie Fu, MD; Joseph Maroon, MD; Michael W. Collins, PhD;  
Anthony P. Kontos, PhD*

### SESSION 1 •••••

#### **Pathophysiology and Biomechanics of Concussion, and the Issue of Chronic Traumatic Encephalopathy (CTE)**

*Moderator: Joseph Maroon, MD*

7:45 AM **State of Concussion Management**  
*Mark R. Lovell, PhD*

8:00 AM **Pathophysiology of Concussion: Moving the Model Forward**  
*William P. Meehan III, MD*

8:30 AM **Biomechanics of Concussion: Understanding the Forces Behind the Injury**  
*Kevin Guskiewicz, PhD*

9:00 AM **Chronic Traumatic Encephalopathy: What Do We Know and What Are We Learning?**  
*Joseph Maroon, MD*

9:15 AM **Moderated Panel Discussion**

9:45 AM **Break and Exhibits**

### SESSION 2 •••••

#### **On-Field and In-Office Evaluation of Concussion**

*Moderator: Michael W. Collins, PhD*

10:00 AM **The NFL Committee on Concussion and On-Field Assessment**  
*John Norwig, ATC*

10:30 AM **In-Office Evaluation of Concussion: Clinical Interview, Neurocognitive Assessment, and Vestibular-Ocular Screening**  
*Michael W. Collins, PhD*

11:15 AM **The Psychometrics Behind Neurocognitive Evaluation for Concussion**  
*Philip Schatz, PhD*

11:45 AM **Moderated Panel Discussion**

Noon **Lunch and Exhibits**

### SESSION 3 •••••

#### **Concussion in Professional Sports: Panel discussion featuring professional team physicians, and players and members of the Pittsburgh Steelers organization**

*Moderator: Michael W. Collins, PhD*

1:00 PM **Concussion in Professional Sports: Panel Discussion**  
*Freddie Fu, MD; Christopher Harner, MD; Robin West, MD;  
players and members of the Pittsburgh Steelers organization;  
additional speakers TBA*

2:00 PM **Moderated Panel Q&A**

2:30 PM **Break and Exhibits**

#### SESSION 4 •••••

##### Emerging Research in Concussion

*Moderator: Anthony P. Kontos, PhD*

- 2:45 PM **Emerging Imaging Techniques for Concussion: High-Definition Fiber Tracking**  
*David Okonkwo, MD, PhD*
- 3:15 PM **Genetic Risk Factors and Biomarkers for Concussion**  
*Barry Jordan, MD, MPH*
- 3:45 PM **The Cutting Edge of Concussion Research: From the Lab to the Clinic**  
*Anthony P. Kontos, PhD*
- 4:15 PM **Moderated Panel Discussion**
- 4:30 PM **Poster Session**
- 5:30 PM **Adjournment**

#### Day 3 Schedule — Sunday, June 9, 2013

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Omni William Penn Hotel, 530 William Penn Place, Pittsburgh, PA 15219

- 7:00 AM **Continental Breakfast**
- 7:30 AM **Opening Remarks**  
*Michael W. Collins, PhD; Anthony P. Kontos, PhD*

#### SESSION 5 •••••

##### Active Treatment and Rehabilitation Approaches for Concussion - Part 1

*Moderator: Michael W. Collins, PhD*

- 7:45 AM **Medical Treatments for Concussion**  
*Kelley Anderson, DO*
- 8:15 AM **The Role of Vestibular Therapy in Concussion**  
*Anne Mucha, DPT, NCS*
- 8:45 AM **Physical Therapy and Progressive Exertion Protocols for Return to Play**  
*Cara Troutman-Enseki, DPT, OCS*

9:15 AM **Moderated Panel Discussion**

9:30 AM **Break and Exhibits**

#### SESSION 6 •••••

##### Active Treatment and Rehabilitation Approaches for Concussion - Part 2

*Moderator: Michael W. Collins, PhD*

- 9:45 AM **Applying Vision Therapy to Concussion**  
*Nathaniel Steinhafel, MS, OD, FAAO*
- 10:15 AM **Academic Accommodations following Concussion**  
*Jonathan French, PsyD*
- 10:35 AM **Pediatric Concussion**  
*Nate Kegel, PhD*
- 11:00 AM **Moderated Panel Discussion**
- 11:15 AM **Break and Exhibits**

#### SESSION 7 •••••

##### Case Studies and Brief Reports

*Moderators: Michael W. Collins, PhD; Anthony P. Kontos, PhD*

- 11:30 AM **Concussion Case Studies and Brief Reports**  
*R.J. Elbin, PhD; Scott Burkhardt, PsyD; Luke Henry, PhD; Eric Johnson, PsyD; Erin Reynolds, PsyD; Michael W. Collins, PhD; other speakers TBA*
- 1:00 PM **Closing Remarks / Conference Adjournment**  
*Michael W. Collins, PhD; Anthony P. Kontos, PhD*

## Course Directors

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### **Michael W. Collins, PhD**

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Chair, Department of  
Orthopaedic Surgery  
University of Pittsburgh School  
of Medicine

*Faculty for this activity has been  
required to disclose all relationships  
with any proprietary entity producing  
health care goods or services.*

## Visiting Faculty

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### **Kevin Guskiewicz, PhD**

Kenan Distinguished Professor and  
Chair, Department of Exercise  
and Sport Science  
Co-Director, Matthew Gfeller Sport-Related  
Traumatic Brain Injury Research Center  
University of North Carolina  
Chapel Hill, NC

### **Barry Jordan, MD, MPH**

Associate Professor of  
Clinical Neurology  
Weill Cornell Medical College  
Director, Brain Injury Program  
Burke Rehabilitation Hospital  
White Plains, NY

### **Mark R. Lovell, PhD**

Chairman and CEO  
ImPACT Applications, Inc.  
Pittsburgh, PA

### **William P. Meehan III, MD**

Director, Sports Concussion Clinic  
Boston Children's Hospital  
Boston, MA

### **John Norwig, ATC**

Head Athletic Trainer  
Pittsburgh Steelers Football Club

### **Philip Schatz, PhD**

Professor of Psychology  
Director, Behavioral Neurosciences  
Program  
Saint Joseph's University  
Philadelphia, PA

### **Nathaniel Steinhafel, MS, OD, FFAO**

Wexford Academy Vision Therapy and  
Learning Center  
Wexford, PA

## University of Pittsburgh Faculty

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### **Kelley Anderson, DO**

Assistant Professor of  
Orthopaedic Surgery  
Division of Sports Medicine

### **Scott Burkhart, PsyD**

Post-Doctoral Research Fellow  
in Clinical Neuropsychology

### **R.J. Elbin, PhD**

Post-Doctoral Research Fellow in  
Orthopaedic Surgery  
Division of Sports Medicine

### **Jonathan French, PsyD**

Clinical Instructor of Orthopaedic Surgery  
Division of Sports Medicine

### **Christopher Harner, MD**

Blue Cross of Western Pennsylvania  
Professor of Orthopaedic Surgery  
Chief, Division of Sports Medicine

### **Luke Henry, PhD**

Post-Doctoral Research Associate  
in Clinical Neuropsychology

### **Eric Johnson, PsyD**

Assistant Professor of  
Orthopaedic Surgery  
Division of Sports Medicine

### **Nate Kegel, PhD**

Clinical Instructor of Orthopaedic Surgery  
Division of Sports Medicine

### **Anne Mucha, DPT, NCS**

Clinical Instructor, School of Health and  
Rehabilitation Sciences

### **David Okonkwo, MD, PhD**

Associate Professor of  
Neurological Surgery

### **Erin Reynolds, PsyD**

Clinical Instructor of Orthopaedic Surgery  
Division of Sports Medicine

### **Cara Troutman-Enseki, DPT, OCS**

Adjunct Professor, School of Health and  
Rehabilitation Sciences  
Physical Therapy Program

### **Robin West, MD**

Associate Professor of  
Orthopaedic Surgery  
Division of Sports Medicine

## Registration Information

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Registration for this course will be accepted as long as space is available, so register early.

Registering online is the quickest and easiest way to reserve your space at CCEHS conferences.

1. Visit our online registration site at:  
**<https://ccehs.upmc.com/liveFormalCourses.jsf>**.
2. Scroll to the *Emerging Frontiers in Concussion: Advancements in Assessment, Management, and Rehabilitation* section on the web page.
3. Click the Registration button and enter all the requested information.
4. After registering, an electronic confirmation will be sent to the email address you provided us when you registered.

*Please note: Registration is not complete until you receive the confirmation letter/ email for your pre-registration. If you do not receive this letter within five to seven days of registration, please contact us at (412) 647-8232.*

**You must bring this confirmation with you to the conference.**

**Paper Registrations by Fax or Mail:** (see contact information below). If you are unable to register online, please call (412) 647-8232 for a paper registration form. Registration forms must be completed and returned by **May 17, 2013**. **Registration is not accepted without payment.**

**Cancellation:** All cancellations must be in writing and sent to us via U.S. Mail, email, or fax (contact information below). Tuition for cancellations postmarked or date stamped before **May 17, 2013** will be refunded in full. After **May 17** a \$35 administrative fee will be assessed. No refunds will be made after **May 24**. Cancellation requests can be made to:

UPMC Center for Continuing Education in the Health Sciences  
200 Lothrop St. • Iroquois Building, Suite 302  
Pittsburgh, PA 15213  
Phone: (412) 647-8232 • Fax: (412) 647-8222  
Email: **[ccehsconfgmt101@upmc.edu](mailto:ccehsconfgmt101@upmc.edu)**

*The UPMC Center for Continuing Education in the Health Sciences reserves the right to cancel this program if sufficient registrations are not received. In the case of cancellation, the department will fully refund registration fees.*

## Registration Fees

Registrant Category	By May 10, 2013	After May 10, 2013
ATC, PT registration	\$150	\$200
Physician registration	\$300	\$350
Psychologist registration	\$200	\$250
Student, fellow, resident registration	\$150	\$200

*Registration fee includes:*

- Continuing education credit
- Registration and course materials
- Continental breakfast, refreshments, lunch, Friday evening cocktail reception, and tour of the UPMC Center for Sports Medicine

## Cocktail Reception and Tour

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**Friday, June 7, 5:15 pm to 7 pm**

UPMC Center for Sports Medicine  
3200 S. Water St.  
Pittsburgh, PA 15203  
Phone: (412) 647-8232

*RSVP for this reception when registering.*

## For Additional Information, Contact:

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UPMC Center for Continuing Education in the Health Sciences  
200 Lothrop St. • Iroquois Building, Suite 302  
Pittsburgh, PA 15213  
Phone: (412) 647-8232 • Fax: (412) 647-8222  
Email: **[ccehsconfgmt101@upmc.edu](mailto:ccehsconfgmt101@upmc.edu)**

The University of Pittsburgh, as an educational institution and as an employer, values equality of opportunity, human dignity, and racial/ethnic and cultural diversity. Accordingly, as fully explained in Policy 07-01-03, the University prohibits and will not engage in discrimination or harassment on the basis of race, color, religion, national origin, ancestry, sex, age, marital status, familial status, sexual orientation, gender identity and expression, genetic information, disability, or status as a veteran. The University also prohibits and will not engage in retaliation against any person who makes a claim of discrimination or harassment or who provides information in such an investigation. Further, the University will continue to take affirmative steps to support and advance these values consistent with the University's mission. This policy applies to admissions, employment, and access to and treatment in University programs and activities. This is a commitment made by the University and is in accordance with federal, state, and/or local laws and regulations. For information on University equal opportunity and affirmative action programs, please contact: University of Pittsburgh; Office of Affirmative Action, Diversity, and Inclusion; Carol W. Mohamed, Director (and Title IX, SO4 and ADA Coordinator); 412 Bellefield Hall; 315 South Bellefield Avenue; Pittsburgh, PA 15260; 412-648-7860. For complete details on the University's Nondiscrimination Policy, please refer to Policy 07-01-03. For information on how to file a complaint under this policy, please refer to Procedure 07-01-03.