fNIRS 2022
Program

Boston University
George Sherman Union
775 Commonwealth Avenue, Boston, MA 02215
https://fnirs2022.fnirs.org/
Welcome to fNIRS 2022, Boston

We are glad to announce that the biennial meeting of the Society for functional Near Infrared Spectroscopy (fNIRS) will finally be held in Boston after being postponed twice due to the difficult times we have endured together. Though we have yet to achieve a full recovery, we have almost 500 registrants, 400 of whom will attend in person, surely a good enough number to let the wheel turn again. From the more than 300 excellent abstract submissions, we have strived to organize a program that will promote discussions, inspire audiences and bring valuable insights, contributing to the further advancement of the field.

We appreciate many colleagues helping us evaluate the submission. Their contributions helped us select the oral and poster sessions, including a virtual oral session and 3 poster blitz sessions newly adopted for this hybrid meeting. The program also includes a keynote talk, eight invited talks introducing each oral sessions, and a special guest talk for further activation of the field. This year special session “Neuroergonomics - fNIRS on the Go” aims to explore possible new directions for fNIRS research. The conference will be preceded by a two-day Educational Program, which will help strengthen the technical foundations of fNIRS studies.

We thank our eleven sponsors for their generous contributions to this conference, and the 15 exhibitors, who will show us all their new fNIRS gadget during the conference. Last but not least, we would like to acknowledge our local colleagues who have arranged for food and coffee and organized social events, and our administrator, Stacey Ladieu, who, as always, has worked overtime trying to accommodate everyone’s needs.

We hope you to have a great time in Boston, a sophisticated, academic city filled with traditional and natural beauties in the lovely autumn season, and we hope this conference will be fruitful for you.

Ippeita Dan, Sabrina Brigadoi, Meryem Yucel and Maria Angela Franceschini

Conference Chairs
# Table of Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing Committee</td>
<td>5</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>8</td>
</tr>
<tr>
<td>Sponsors</td>
<td>9</td>
</tr>
<tr>
<td>Exhibitors</td>
<td>10</td>
</tr>
<tr>
<td>Access Map</td>
<td>11</td>
</tr>
<tr>
<td>Venue</td>
<td>11</td>
</tr>
<tr>
<td>George Sherman Union</td>
<td>13</td>
</tr>
<tr>
<td>Social Event Venue &amp; Information</td>
<td>14</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>15</td>
</tr>
<tr>
<td>Information for Presenters and Attendees</td>
<td>16</td>
</tr>
<tr>
<td>In-Person Orals</td>
<td>16</td>
</tr>
<tr>
<td>Poster Blitz &amp; Virtual Posters in the Spotlight Oral Sessions</td>
<td>17</td>
</tr>
<tr>
<td>For Audience</td>
<td>18</td>
</tr>
<tr>
<td>Posters</td>
<td>18</td>
</tr>
<tr>
<td>Schedule at a Glance</td>
<td>20</td>
</tr>
<tr>
<td>Chat Feature and Search Engine</td>
<td>21</td>
</tr>
<tr>
<td>In-Person Program</td>
<td>22</td>
</tr>
<tr>
<td>Sunday October 9, 2022</td>
<td>23</td>
</tr>
<tr>
<td>Monday October 10, 2022</td>
<td>24</td>
</tr>
<tr>
<td>Tuesday October 11, 2022</td>
<td>27</td>
</tr>
<tr>
<td>Wednesday October 12, 2022</td>
<td>30</td>
</tr>
<tr>
<td>Educational Courses</td>
<td>33</td>
</tr>
<tr>
<td>Schedule</td>
<td>34</td>
</tr>
<tr>
<td>MiniCourses</td>
<td>35</td>
</tr>
<tr>
<td>Venue</td>
<td>36</td>
</tr>
<tr>
<td>Virtual Program</td>
<td>38</td>
</tr>
<tr>
<td>Virtual Posters Zoom Program</td>
<td>39</td>
</tr>
<tr>
<td>October 3, 2022</td>
<td>40</td>
</tr>
<tr>
<td>October 4, 2022</td>
<td>41</td>
</tr>
</tbody>
</table>
October 5, 2022 .................................................................................................................. 41
October 6, 2022 .................................................................................................................. 43
GatherTown......................................................................................................................... 44
Posters .................................................................................................................................. 45
Poster Session 1 .................................................................................................................... 46
Poster Session 2 .................................................................................................................... 53
Poster Session 3 .................................................................................................................... 61
Virtual Posters ....................................................................................................................... 68
DEI Travel Awards Recipients .............................................................................................. 72
Author Index .......................................................................................................................... 74

By Androu Abdalmalak and Mari Franceschini
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Ursula Wolf, Universität Mannheim, Switzerland

Students-Post Doc Help

Androu Abdalmalak, University of Western Ontario, Program and Week 1 Zoom Moderator
Bryce Carr, Mass General Hospital, Week 2 Zoom Moderator
Mehrdad Dadgostar, Mass General Hospital, Website Conference Subscription
Zahra Einalou, *Mass General Hospital*, GatherTown Posters and Zoom Orals Upload
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Susanna Tagliabue, *ICFO Barcelona*, GatherTown Posters Upload
Hannah Whitehead, *University of Toronto*, Webpage Support
Marta Zanoletti, *ICFO Barcelona*, GatherTown Posters Upload
Fen Zhang, *ICFO Barcelona*, GatherTown Management

**fNIRS Administrator**

Stacey Ladieu
Parya Farzam & Praj Lanjewar, *Boston University*, Admin Conference Support
For any questions or concerns, please email Stacey (admin@fnirs.org)
Acknowledgments

We thank all the reviewers for their time and effort to reviews and score the abstracts:

Adam Eggebrecht
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Anna Blasi
Anna Gerega
Antonia Hamilton
Antonio Ortega
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Candida Barreto
Caterina Amendola
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Michal Balberg
Mingming Zhang
Mitchell Robinson
Natalie Gilmore
Nisan Ozana
Noman Naseer
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Yafeng Pan
Yasuyo Minagawa
Yumie Ono
Yunjie Tong
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Platinum

https://tech.fb.com

https://nirx.net

https://www.kernel.com

Gold

https://optoecomponents.com

https://www.hamamatsu.com

https://www.techen.com

https://www.pionirs.com

https://www.cortivision.com

https://www.spiedigitallibrary.org

Silver

https://biopixstandards.com

https://www.boselec.com

Supported by the National Institute of Health
Exhibitors

The following exhibitors will be at fNIRS 2022. The exhibition will be held in the Ziskind lounge located on the second floor of the George Sherman Union (room layout below).

Artinis
Biopac
Boston Electronics
Cortivision
Gowerlabs
ISS Inc
Neuluce

NIRx
Obelab
OptoElectronics Components
PioNIRS
Rogue
Seenel Imaging
Spectratech/VOX Biomedical
TechEn
Access Map

Venue

The conference will be hosted by Boston University, in the George Sherman Union. The GSU is located in the heart of Boston University Campus.

The venue is walking distance from downtown Boston and Central Square in Cambridge, and it can be easily reached via Storrow Drive, I-90, and public transportation.

The venue provides access to participants with disabilities and, if needed, additional support is provided by the Boston University Office of Disability Services.
Access Map

A full map of Boston University can be found [here](#).
The George Sherman Union is located on the Boston University campus at 775 Commonwealth Avenue, Boston, MA 02215. The first floor of the GSU is a lively meeting center for students with several restaurants and shops. The conference rooms are on the second floor.
Social Event Venue & Information

The social event is taking place at The Royale which is about 50 min walk (2.6 miles) from the conference venue, crossing the main downtown Boston streets. It is also reachable via metro (green line) in 20 min.
Health and Safety

• All staff, exhibitors and attendees must be vaccinated, without exception (booster vaccinations encouraged), and masks are required indoor.

• The GSU offers large spaces to provide social-distancing in support of a safe meeting

fNIRS 2022 safe meeting protocols

• We will follow the latest published requirements and safe gathering protocols established by the city of Boston and State of Massachusetts.

• Among national, state, local, or facility-specific rules or recommendations we will abide by the most restrictive of them. Event policies may change if local, state, or federal rules change prior to or during an event.

• For up-to date information, please visit the links below

Expectations for all attendees

• Enhanced sanitation measures will be taken throughout the event

• Masks and hand sanitizers will be widely available for free

• Conference space will allow for social distancing to the extent possible

How you can help

• Wash hands frequently

• Respect the personal space and comfort level of others

• Do not attend if you are not feeling well

• Follow the guidelines from the Boston Public Health Department and CDC on quarantine

• We encourage you to get tested if required for travel, have known exposure, or have symptoms following CDC and Boston Public Health guidelines.
Information for Presenters and Attendees

In-Person Orals

All in-person presenters will be required to use the conference computer system to minimize setup time and, most important, to allow virtual attendees to see presentations via zoom, without relaying on personal computers wi-fi connection.

- Slides must be submitted at least one day before your scheduled talk day.
- We will provide presenters with the link by email by October 1st, 2022.
- The file name of your presentation should start with the session_abstract ID #s followed by the presenting author name as entered when you submitted the abstract: «Session#_#»._«Abstract ID #»._«Presenting_Author», example: OS1_06_12_name_lastname
- We suggest bringing a copy of all the files including movies on a USB key.
- Please prepare the slides either in power point or in .pdf. Widescreen or 16:9 layout is recommended.
- The number of slides should be based on the length of your presentation. As a rule of thumb, you should have one slide per minute of talk time.
- If you are including videos in your presentation, it is highly recommended you use a standard codec to avoid playback issues. Exporting the presentation using the Package for CD option from PowerPoint will ensure that all media files are copied into one location and file paths are adjusted inside the presentation.
- Windows Video Player is installed in the presentation computer.
- At the conference before your presentation, we recommend you check with conference AV to ensure the slides are displayed correctly by the conference computer.
- Presenters unable to join in person, will be able to present virtually via zoom. Still, we ask them to upload their presentation at least one day before their talk, and to connect 15 minutes before the start of the session to test connection and slides.
- Virtual oral presenter will be receiving instructions and an individualized zoom link to join the oral session prior of their presentation.
- Each session will be hosted by at least two chairs and a Zoom technical moderator.
- For the Q&A in-person audience will use microphones in the ballroom corridors, virtual attendees will use the fNIRS chat, Zoom Q&A feature will not be available.

For additional information about file format, file upload etc. please contact Zahra Einalou, at ZEINALOU@mgh.harvard.edu, or Bryce Carr at BCARR3@mgh.harvard.edu
Poster Blitz & Virtual Posters in the Spotlight Oral Sessions

By September 30, 2022 you have to upload your presentation to the link we provided you with via email

- Please prepare the slides either in power point or in .pdf.
- Widescreen or 16:9 layout is recommended.
- Please prepare slides based on the length of your presentation. As a rule of thumb, you should have one slide per minute of talk time. We suggest 3 slides for the poster blitz sessions and 10 slides for the Virtual Posters in the Spotlight session.
- The file name should start with the session_abstract ID # followed by the presenting author name as entered when you submitted the abstract
  - «Session#_#»_«Abstract ID #»_«Presenting_Author»
  - example: PSV_44_56_name_lastname
- Virtual Oral presenter will be receiving instructions and an individualized zoom link to join the virtual oral session prior of their presentation.
- The day of your presentation you will have to connect to zoom 15 minuets before the start of the session to test connection and slides.
- Please ensure that you have a good internet connection, good microphone, and a webcam available for your presentation. We will ask you to turn the camera on during your presentation.
- The audience will be muted during the talks and they should use the fNIRS.org chat page of the presented talk to post questions to the speaker.
- Each Zoom session will be hosted by at least two chairs who will also serve as technical moderators. The session presenters will be made panelists.

For additional information about the file format and upload please contact Dr. Sabrina Brigadoi at sabrina.brigadoi@unipd.it
For Audience

- The audience will be muted during the talks and they should use the fNIRS.org chat page of the presented talk to post questions to the speaker.
- Each Zoom session will be hosted by at least two chairs who will also serve as technical moderators. The session presenters will be made panelists.

Posters

GatherTown

By September 30, 2022 all posters need to be uploaded to the link we provided by email

- For the upload to gatherTown the poster need to be converted to an image, with either .png or .jpg format.
- The resolution should be at least 1000 pixel wide and 1000 pixel high.
- More is better but the file size should not exceed 3MB.
- Before uploading the poster, please open the poster with any image software in your computer and check the resolution quality. If the text in the image is not clear, please save it with higher resolution.
- The file name should start with the session_abstract ID # followed by the presenting author name as entered when you submitted the abstract: «Session#_#»_«Abstract ID #»_«Presenting_Author», example: PS2_92_138_name_lastname
- During the Poster Sessions presenters are asked to stand next to their poster by the start of the poster session to be ready to explain the poster. Press X to interact with the poster (view in full-screen mode).
- GatherTown offers the possibility for the presenter to point at the poster using the function ”Presenter Mode” on the right hand side of the screen when looking at the poster.
For additional information about the file format and upload please contact Dr. Fen Zhang Fen.Zhang@icfo.eu

**In-Person**

Posters in Session 1, Session 2 and Session 3 will also be presented in-person at the conference.

- Printed poster dimension cannot exceed 42 inches wide and 42 inches high.
- Posters need to be mounted the morning of your session and removed by the end of the day.
- Your poster location is marked by the session#_# id (example PS3_12).
- Virtual only Posters do not have a poster board and do not need to be printed.

We suggest you to prepare your poster in a landscape format, because it fits the computer screen better when seen in Gathertown. Poster boards are 4 feet high and 8 feet wide with two posters on each. To give equal space and allow for some separation to the two presenters, posters cannot be more than 42" wide.

For additional information about Oral and Posters contact Stacey at admin@fnirs.org
# Schedule at a Glance

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 3</td>
<td>October 4</td>
<td>October 5</td>
<td>October 6</td>
<td>October 7</td>
<td>October 8</td>
<td>October 9</td>
<td>October 10</td>
<td>October 11</td>
<td>October 12</td>
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<td><strong>All day</strong></td>
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<td><strong>Virtual</strong></td>
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<tr>
<td>8:00-9:30</td>
<td>Poster Blitz</td>
<td>Poster Blitz</td>
<td>Poster Blitz</td>
<td>Poster Blitz</td>
<td>Virtual Posters</td>
<td>General Intro</td>
<td>Session 1</td>
<td>Session 4</td>
<td>Session 8</td>
</tr>
<tr>
<td></td>
<td>Session 1</td>
<td>Session 2</td>
<td>Session 3</td>
<td></td>
<td>Session</td>
<td>to fnirs</td>
<td>Neurodevelopment</td>
<td>Social Neuroscience</td>
<td>Methods</td>
</tr>
<tr>
<td>9:30-10:00</td>
<td>Poster Town</td>
<td>Poster Town</td>
<td>Poster Town</td>
<td>Poster Town</td>
<td>Posters</td>
<td></td>
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<td></td>
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<tr>
<td>10:00-11:00</td>
<td>Meet at the Posts</td>
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<td>Meet at the Posts</td>
<td>Posters</td>
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<td>11:00-12:00</td>
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<tr>
<td><strong>In-Person</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Session 5</td>
<td>Session 6</td>
<td>Session 9</td>
</tr>
<tr>
<td>Coffee Break</td>
<td>Guest Speaker</td>
<td>Session 5</td>
<td>Training</td>
<td></td>
<td></td>
<td>Lunch &amp;</td>
<td>Preclinical &amp;</td>
<td>Data Analysis</td>
<td>Cognitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aging, Neurodegeneration, Vascular Dysfunction</td>
<td></td>
<td></td>
<td></td>
<td>Posts Session 2</td>
<td>Clinical</td>
<td></td>
<td>Neuroscience</td>
</tr>
<tr>
<td><strong>Educational</strong></td>
<td></td>
<td></td>
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<tr>
<td>Minicourses</td>
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<td></td>
<td>Lunch &amp;</td>
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<tr>
<td>Registration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Posts Session 3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Happy Hour</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Opening Remarks</td>
<td></td>
<td></td>
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<td>Reception</td>
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**fNIRS 2022**

October 9-12, Boston, MA

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INIRS 2022 Schedule
Chat Feature and Search Engine

The following pages contain the conference program; however, we recommend using the website instead because of the search engine and chat features.

Chat feature for off-line discussion

Each abstract has a dedicated page where you can find the PDF summary and you can comment on the work, ask questions, and schedule meetings with the authors.

All authors should subscribe to comments on their own submissions so that they get emails when someone else posts a comment.

All comments can be seen at: https://fnirs.org/latest-comments/

These pages are only visible to fNIRS2022 attendees

Search engine

The search tab on the top right corner of the webpage allows you to search any topic across all abstracts, including PDF summaries.

You can also see what Authors have submitted at: https://fnirs.org/events/conferences/fnirs-2022-schedule/fnirs-2022-author-index/ .
### Opening Remarks: 6:00-6:30 PM EDT

### Keynote: 6:30-7:30 PM EDT

Session Chairs: **Ippeita Dan**, Chuo University, Japan, **Mari Franceschini**, MGH, Harvard Medical School, USA

18:30 – *The New Neuroscience of Two: Breakthrough fNIRS technology and emerging principles of dyadic interaction*, Joy Hirsch, Yale School of Medicine
Monday - October 10, 2022

Oral Session 1: Neurodevelopment, 8:00-9:45 AM EDT

Session Chairs: Lauren Emberson, University of British Columbia, Canada, Kaja Jasinska, University of Toronto, Canada

08:00 – Infant’s face perception: fNIRS studies, Masami Yamaguchi, Chuo University (OS1_00_INVITED1)

08:30 – fNIRS Infant Habituation and Novelty detection responses in The Gambia, a Threshold-Free Cluster Enhancement (TFCE) analysis, Anna Blasi Ribera, University College London (OS1_01_29)

08:45 – Altered fNIRS language networks in children with fronto-temporal lobe epilepsy, Alejandra Hüsser, Université de Montréal (OS1_02_117)

09:00 – Habitual sleep and functional connectivity during a nap in infants, Louisa K. Gossé, Birkbeck University (OS1_03_124)

09:15 – Infant frontal asymmetry is associated with psychopathology in early childhood, Caroline Kelsey, Boston Children’s Hospital (OS1_04_191)

09:30 – How do the brains of preschoolers process language that is presented during shared book reading and screen time?, Meredith Pecukonis, Boston University (OS1_05_91)

Coffee Break: 9:45-10:05 AM EDT

Guest Speaker: 10:05-11:00 AM EDT

Session Chairs: Arjun Yodh, University of Pennsylvania, USA, Sabrina Brigadoi, University of Padova, Italy

10:05 – NIBIB and the pandemic response: New opportunities for accelerating innovation from in vitro diagnostics (IVD) to medical imaging, Bruce Tromberg, National Institutes of Health
Award Ceremony and Early Investigator Award talks: 11:00-11:50 AM EDT

Session Chairs: Mari Franceschini, SfNIRS President, MGH, Harvard Medical School, USA, Joe Culver, SfNIRS President Elect, Washington University School of Medicine, USA, Clare Elwell, SfNIRS Past President, University College London

Lunch and Poster Session 1, 11:50 AM – 2:00 PM EDT

Oral Session 2: Preclinical and clinical applications, 2:00-3:45 PM EDT

Session Chairs: Stefan Carp, Massachusetts General Hospital, USA, Justin Skowno, University of Sydney, Australia

14:00 – Clinical use of Cerebral Oximetry, Gregory W. Fischer, Memorial Sloan Kettering Cancer Center (OS2_00_INVITED2)

14:30 – Spontaneous systemic fluctuations measured with fNIRS at rest are sensitive to carotid artery disease, Luis Felipe Bortoletto, University of Campinas (OS2_01_212)

14:45 – Influence of cerebral perfusion pressure on neurovascular coupling link to autoregulatory health, Deepshikha Acharya, Carnegie Mellon University (OS2_02_126)

15:00 – Agreement Among Experimental Cerebrovascular Reactivity Paradigms Assessed with Diffuse Correlation Spectroscopy Improves with Short Separation Regression, Kyle Cowdrick, Georgia Institute of Technology and Emory University (OS2_03_106)

15:15 – Detecting covert consciousness using movies in the intensive care unit: an fNIRS study, Matthew Kolisnyk, University of Western Ontario (OS2_04_100)

15:30 – Assessing the Sensitivity of a High-Density Time-Resolved Near-Infrared Spectroscopy Device for Neuromonitoring, Farah Kamar, Western University (OS2_05_141)
Coffee Break: 3:45-4:05 PM EDT

Oral Session 3: Neonatal clinical applications, 4:05-5:45 PM EDT

Session Chairs: Turgut Durduran, ICFO, Spain, John Sunwoo, Massachusetts General Hospital, USA

16:05 – Quantitative NIRS for Neonatal Neuromonitoring, Mamadou Diop, Western University (OS3_00_INVITED3)

16:35 – Does glycemic control in preterm neonates impact on brain hemodynamics at birth and neurodevelopmental outcome? Preliminary results of the BabyGlucoLight clinical trial, Sabrina Brigadoi, University of Padova (OS3_01_235)

16:50 – Early Cerebral Oxygen Saturation and Brain Injury in Extremely Preterm Infants, Mohamed El-Dib, Brigham and Women’s Hospital (OS3_02_190)

17:05 – Changes in cerebral tissue oxygenation and perfusion in preterm infants induced by creative music therapy, Felix Scholkmann, University Hospital Zurich (OS3_03_26)

17:20 – Functional Imaging the Preterm Brain with Combined High Density Diffuse Optical Tomography and EEG, Julie Uchitel, University of Cambridge (OS3_04_161)

17:35 – Investigation of the relationship between cerebral oxygen metabolism and the oxidative state of cytochrome-c-oxidase in neonatal encephalopathy, Frédéric Lange, University College London (OS3_05_329)
Tuesday - October 11, 2022

Oral Session 4: Social Neuroscience, 8:00-9:45 AM EDT

Session Chairs: Hiroki Sato, Shibaura Institute of Technology, Japan, Adam Noah, Yale University, USA

08:00 - Using fNIRS-based hyperscanning to promote research on Neuromanagement, Tao Liu, Zhejiang University (OS4_00_INVITED4)

08:30 - Neural processing of social gaze cueing in typical and ASD adults during a live face-to-face joint attention task, Termara C. Parker, Yale School of Medicine (OS4_01_226)

08:45 - Brain-to-Brain Synchrony in Speech Communication, Geoff D. Green II, The Ohio State University (OS4_02_44)

09:00 - The Development of Large-Scale Neural Networks: A Longitudinal Investigation of Resting-State and Background Task-Based Connectivity in Infancy, Sabrina M. Di Lonardo Burr, University of British Columbia (OS4_03_55)

09:15 - Group-level evaluations predict group neural synchrony but self-evaluations do not, Bear Goldstein, University of California, Los Angeles (OS4_04_135)

09:30 - Dynamic Inter-brain Synchrony in Real-life Creative Problem Solving: an fNIRS-based Hyperscanning Study, Rihui Li, Stanford University (OS4_05_200)

Coffee Break: 9:45-10:05 AM EDT

Oral Session 5: Aging Neurodegeneration Vascular Dysfunction, 10:05-11:50 AM EDT

Session Chairs: Keith St. Lawrence, University of Western Ontario, Canada, Gemma Bale, University of Cambridge, UK

10:05 - NIRS-based neurofeedback, Ann-Christine Ehlis, University Hospital Tuebingen (OS5_00_INVITED5)
10:35 – Diffuse optical measurement of cerebral autoregulation during first mobilization to personalize physiotherapy in a randomized stroke trial, Lisa Kobayashi Frisk, ICFO (OS5_01_50)

10:50 – Whole-head fNIRS assessment of brain plasticity in Parkinson’s Disease over telerehabilitation program, Augusto Bonilauri, Politecnico di Milano Bolzano (OS5_02_168)

11:05 – Towards a dementia monitoring protocol using HD-DOT, Sruthi Srinivasan, University of Cambridge (OS5_03_115)

11:20 – Age-related changes of neurovascular coupling and global brain network function and its association to cognitive performance: a human fNIRS study, Peter Mukli, University of Oklahoma (OS5_04_341)

11:35 – Altered oxygenation of blind individuals during postural control indicates neuroplastic changes, Ingo Helmich, German Sport University (OS5_05_22)

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**Lunch and Poster Session 2, 11:50 AM – 2:00 PM EDT**

**Oral Session 6: Data Analysis, 2:00-3:45 PM EDT**

Session Chair: Felipe Orihuela-Espina, University of Birmingham, UK, Adam Eggebrecht, Washington University School of Medicine, USA

14:00 – Mobile brain imaging with fNIRS: opportunities and methodological challenges in toddlers, Paola Pinti, Birkbeck College (OS6_00_INVITED6)

14:30 – Coherent hemodynamics and dual slopes for non-invasive optical measurements of the human brain, Sergio Fantini, Tufts University (OS6_01_59)

14:45 – Correspondence between Simultaneously Collected fMRI and Image Reconstructed fNIRS using both Individual Anatomy and a Structured-Light 3D Scanner, Sara Sanchez-Alonso, Haskins Laboratories (OS6_02_295)

15:00 – Leveraging fMRI data to simulate and evaluate the potential performance of fNIRS/DOT systems, Morgan Fogarty, Washington University in St. Louis (OS6_03_184)

15:15 – A hyperspectral analysis of the superficial changes cancellation using a short-distance channel, Vladislav Toronov, Toronto Metropolitan University (OS6_04_294)
15:30 – *Multiverse-Analysis Reliability Index (MARI): Evaluate the Reliability of fNIRS Results*, Chenghao Zhou, New York University (OS6_05_103)

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**Coffee Break: 3:45-4:05 PM EDT**

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**Oral Session 7: Hardware, 4:05-5:50 PM EDT**

Session Chairs: Alessandro Torricelli, Politecnico di Milano, Italy, Rodrigo Forti, Children’s Hospital of Philadelphia, USA

16:05 – *Low-cost and wearable blood flow measurements with Integrated Diffuse Speckle Contrast Spectroscopy*, Ashwin Parthasarathy, University of South Florida (OS7_00_INVITED7)

16:35 – *Whole-head, Wearable, High-Density Integrated fNIRS- EEG Instrument for Naturalistic Studies*, Luca Pollonini, University of Houston (OS7_01_356)

16:50 – *Utilization of Frequency Domain-fNIRS to improve contrast*, Guy A. Perkins, University of Birmingham (OS7_02_207)

17:05 – *Fast multichannel TD fNIRS for studying cerebral oscillations*, Rebecca Re, Politecnico di Milano (OS7_03_143)

17:20 – *Long wavelength interferometric diffuse correlation spectroscopy for high SNR measurements of cerebral blood flow*, Mitchell Robinson, Massachusetts General Hospital (OS7_04_198)

17:35 – *Development of a fiber-based speckle contrast optical spectroscopy system to measure human cerebral blood flow*, Xiaojun Cheng, Boston University (OS7_05_23)
Wednesday - October 12, 2022

Oral Session 8: fNIRS methods, 8:00-9:30 AM EDT

Session Chairs: Rickson Mesquita, University of Campinas, Brazil, Sungho Tak, Korea Basic Science Institute, Korea

08:00 – ManyBabies3NIRS: A large-scale, multi-lab NIRS replication study assessing infants' ability to extract regularities from speech, Judit Gervain on behalf of the MB3N consortium, Multiple affiliations (OS8_01_237)

08:15 – Whole-head wearable high-density diffuse optical tomography in the adult brain, Ernesto Elias Vidal Rosas, University College London (OS8_02_338)

08:30 – Classification of Impairment from 9-tetrahydrocannabinol (THC) using resting-state neuroimaging, Jodi Gilman, Massachusetts General Hospital (OS8_03_281)

08:45 – NIRS Data Augmentation Technique to Detect Hemodynamic Peaks during Self-Paced Motor Imagery, Zephaniah Phillips V, Korea University (OS8_04_43)

09:00 – Using preregistration as a tool for transparent fNIRS study design a guide and template, David M. A. Mehler, RWTH Aachen University (OS8_05_65)

09:15 – When the brain goes diving: Towards CW-NIRS measurements in free-ranging diving animals and humans, J. Chris McKnight, University of St Andrews (OS8_06_242)

Coffee Break: 9:30-9:50 AM EDT

Special Session: Neuroergonomics – fNIRS on the go, 9:50 AM-12:00 PM EDT

Session Chairs: Hasan Ayaz & Adrian Curtin, Drexel University, USA

09:50 – Neuroergonomics: Towards Ubiquitous and Continuous Measurement of Brain Function during Everyday Life, Hasan Ayaz, Drexel University
10:10 – Mobile fNIRS instruments for Neuroimaging in the Everyday World: Progress and Challenges, Alexander von Lühmann, NIRx

10:30 – Recent Advances in fNIRS Signal Processing: Temporal, Spectral and Spatial Methods, Meltem Izzetoglu, Villanova University

10:50 – FNIRS Applications in Physical Human-Technology Partnerships, Ranjana Mehtae, Texas A&M University

11:10 – The role of fNIRS in Clinical use: What are the current opportunities and limitations?, Wei-Peng Teo, Singapore National Institute of Education

11:30 – Panel discussion

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**Lunch and Poster Session 3, 12:00 – 2:10 PM EDT**

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**Oral Session 9: Cognitive neuroscience, 2:00 – 3:55 PM EDT**

Session Chairs: Heather Bortfeld, University of California, Merced, USA, Michal Balberg, Holon Institute of Technology, Israel

14:10 – Optical imaging in cognitive neuroscience: old concepts, current challenges and new perspectives, Simone Cutini, University of Padova (OS9_00_INVITED9)

14:40 – Effects of Remote Presence on Cognitive and Physiological Measures during Cooperative E-Gaming, Adrian Curtin, Drexel University (OS9_01_293)

14:55 – Investigating brain function during motor imitation with high-density diffuse optical tomography (HD-DOT), Tessa George, Washington University School of Medicine (OS9_02_252)

15:10 – Relationship between autonomic responses and cortical activation pattern during the concealed information test, Kiyomitsu Niioka, Chuo University (OS9_03_333)

15:25 – fNIRS-guided Neurofeedback to Alleviate Motor Symptoms in Parkinsons Disease: A Proof-of-Concept Study, Franziska Klein, Carl von Ossietzky University of Oldenburg (OS9_04_37)

15:40 – Examining workersdecision-making and safety behaviors under occupational stressors: A neuro-psychophysiological assessment, Shiva Pooladvand, Purdue University (OS9_05_41)
Coffee Break: 3:55-4:15 PM EDT

General Assembly: 4:15-5:30 PM EDT

Closing Remarks

Virtual attendees: For comments about these last 2 sessions please use the Bulletin Board
fNIRS 2022
Educational Courses Program
Preceding the conference on October 8 and 9, 2022, we will run an educational course which will include multiple minicourses running in parallel and repeated over the weekend.

Please note that this event does not have any virtual option.

We will start Saturday morning with the fNIRS introduction that has been a traditional part of the SfNIRS pre-conference educational course. The lecture will be followed on Saturday afternoon and all day on Sunday by parallel sessions to provide minicourses hands-on demonstrations on more focused topics.
MiniCourses

01 Emberson et al.  Overcoming the methodological challenges of developmental fNIRS  Experimental Methods
02 Wabnitz & Pifferi  Performance assessment and ISO/IEC standards in fNIRS and cerebral oximetry  Lecture
03 Fox  NIR and the alcohol beverage industries  Lecture
04 NIRx, Gemignani  Analytical and experimental consideration in fNIRS: with the focus on toddler and children population  Demo Tech
05 Artinis, van der Putte  Application of wearable fNIRS for robust real-life measurements  Demo Tech
06 NIRx, von Lümann.  Advanced multiplexing: Multi-step illumination and extended frequency encoding for high-density fNIRS  Demo Tech
07 Torricelli  Time-domain fNIRS  Demo Tech
08 Stefan Carp  Diffuse correlation spectroscopy for measuring cerebral blood flow  Demo Tech
09 Bale & Tachtsidis  Monitoring brain metabolism via quantification of oxidation changes in cytochrome-c-oxidase: how and why?  Demo Tech
10 Gervain & Obrig  EEG-NIRS co-registration: challenges and solutions  Analysis Methods
11 Orihuela-Espina & Andreu-Perez  Topological analysis of fNIRS neuroimages  Analysis Methods*
12 Mesquita  Functional connectivity with fNIRS: from basic to integrated approaches  Analysis Methods
13 Zinszer & Emberson  Multivariate pattern analysis for fNIRS: advancing from “where in the brain?” to “what’s in the brain?”  Analysis Methods
14 Eggebrecht & Dehghani  Diffuse optical mapping of human brain function using NIRFAST and NeuroDOT  Toolbox
15 Cortivision, et al.  An introduction to online fNIRS signal processing and control in experiments using a virtual reality environment  Analysis Methods
16 Huppert et al.  Introduction to the NIRS Brain AnalyzIR toolbox  Toolbox
17 Huppert et al.  Advanced topics in the NIRS Brain AnalyzIR toolbox  Toolbox*
18 Huppert et al.  Multimodal topics in the NIRS Brain AnalyzIR toolbox  Toolbox*
19 Fang  Light modeling in the brain using Brain2Mesh and MCX/MMC  Toolbox
20 Zeffiro  Statistical modeling of fNIRS data using the R statistical programming language  Toolbox*
21 Grova & Delaire  NIRSTORM: a brainstorm plugin dedicated to fNIRS stat. analysis, 3D reconstructions & optimal probe design  Toolbox
22 Pollonini et al.  Software tools for assessing and enhancing quality of fNIRS experimental measurements  Toolbox
23 Erel & Jaffe-Dax  STORM-Net: Open-source toolbox for automatic subject-specific co-registration of probe placements for developmental and clinical populations  Toolbox
24 Luke  Introduction to processing fNIRS data with MNE-NIRS  Toolbox
25 NIRx, Lührs et al.  Introductory to fNIRS analysis using the Satori software: from experiment design to presentation of findings  Toolbox
26 Lührs & Sorger  Introduction to real-time fNIRS data analysis and BCI applications  Analysis and Demo

*advanced
Educational Courses - Venue

The educational courses will be held at the Rajen Kilachand Center for Integrated Life Sciences and Engineering and the Morse Auditorium (see maps below).
Educational Courses - Venue

Floor plan of the Rajen Kilachand Center for Integrated Life Sciences and Engineering

The reception, lunches and coffee breaks will all be held in the Registration area.
fNIRS 2022
Virtual Program
**fNIRS 2022 Virtual Posters Zoom Program**

<table>
<thead>
<tr>
<th></th>
<th>Monday October 3</th>
<th>Tuesday October 4</th>
<th>Wednesday October 5</th>
<th>Thursday October 6</th>
<th>Friday October 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 3-12 All day</td>
<td>GatherTown Poster Viewing</td>
<td>Poster Blitz Session 1</td>
<td>Virtual Posters in the Spotlight</td>
<td>Poster Blitz Session 2</td>
<td>Poster Blitz Session 3</td>
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<td>8:00-8:30</td>
<td>Poster Blitz Session 1</td>
<td>Virtual Posters in the Spotlight</td>
<td>Poster Blitz Session 2</td>
<td>Poster Blitz Session 3</td>
<td>Virtual Posters Session</td>
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Starting on October 3 until October 6, 2022, every morning at 8:00 AM EDT we will have a one hour Zoom oral poster session.

The link to GatherTown webpage and zoom sessions can be found at: [https://fnirs.org/events/conferences/sfnirs-2022-virtual-program/fnirs2022-links-to-gathertown-and-zoom-sessions/](https://fnirs.org/events/conferences/sfnirs-2022-virtual-program/fnirs2022-links-to-gathertown-and-zoom-sessions/)

The access is restricted to Conference registrants.

We thank Dr. Sabrina Brigadoi, University of Padua, Italy, chair of the virtual program for setting up this exciting and diverse program.
October 3, 2022

Zoom Poster Blitz Session 1: 8:00-9:00 AM EDT
3 minutes oral presentations

Session Chairs: Androu Abdalmalak, Western University, Canada, Caterina Amendola, Politecnico di Milano, Italy


PS2_37_185 – *Investigating effects of Modulation Frequency for High Density Diffuse Optical Tomography in Neonates*, Weihao Fan, Washington University in St. Louis

PS3_23_276 – *NIRS-PPG to assess cerebral vasculature health*, Kuan-Cheng Wu, Massachusetts General Hospital

PS2_61_221 – *Increased neural coupling and ratings of subjective connection during face-to-face gaze and harmonious music*, Amanda Watts | AZA Stephen Allsop, Yale University

PS1_33_64 – *High Cognitive Load Needs Greater Brain Signal Variability: A Functional Near Infrared Spectroscopy Study*, Hong Li, Beijing Normal University

PS1_72_130 – *The reproducibility of infant fNIRS studies: a meta-analytic approach*, Jessica Gemignani, University of Padova

PS2_04_85 – *Altered functional connectivity patterns in term newborns with neonatal opioid withdrawal syndrome revealed by resting-state functional near-infrared spectroscopy*, Lingkai Tang, Western University

PS1_43_77 – *Cortical Activation during signal leg stance in Alpine skier using fNIRS A case study*, Haroon Khan, OsloMet – storbyuniversitetet

PS2_31_179 – *Synchronization of brain activity associated with eye contact: Comparison of face-to-face and online communication*, Ren Sato, Shibaura Institute of Technology

PS2_65_225 – *Sex Differences in Neural Profiles of Toddlers at Risk for Attention-Deficit Hyperactivity Disorder (ADHD)*, Haylee Hudson, Boys Town National Research Hospital

PS3_65_339 – *Two-in-one system and behavior-specific brain synchrony during cooperative goal-free creation*, Mingdi Xu | Yasuyo Minagawa, Keio University
October 4, 2022

Virtual Posters in the Spotlight Session: 8:00-9:00 AM EDT
10 minutes oral presentations

Session Chairs: Stephane Perrey, University of Montpellier, France, Guy Perkins, University of Birmingham UK

PSV_24_324 – Wavelet analysis of cerebral haemodynamic and metabolic changes during cardiac surgery, Kirill Soulov, University of Queensland

PSV_19_241 – Assessment of functional plasticity in children with cerebral palsy in response to robotic-assisted gait training, David Perpetuini, University of Chieti-Pescara

PSV_27_348 – Towards an optical simulator for time-domain cerebral tissue oximetry, Aleh Sudakou, Polish Academy of Sciences

PSV_02_15 – Dose-response relationship of iTBS for prefrontal activation and executive function: A TMS-fNIRS study, Bella B.B. Zhang, The Hong Kong Polytechnic University

PSV_10_118 – Changes in cerebral oxygenation and systemic physiology in good, moderate and poor performers of a verbal fluency task under blue light exposure, Hamoon Zohdi, University of Bern

October 5, 2022

Zoom Poster Blitz Session 2: 8:00-9:00 AM EDT
3 minutes oral presentations

Session Chairs: Hubin Zhao, University College London, UK, Samuel Montero-Hernandez, University of Houston, USA
PSV_09_116 – Broadband NIRS reveals protection of neuro-vascular and neuro-metabolic coupling by nimodipine in an animal model of cerebral small vessel disease, Zhiyuan Yang, University College London

PS1_04_13 – Coupling of peripheral and cerebral hemodynamics across wake and light NREM sleep, Vidhya Vijayakrishnan Nair, Purdue University

PS1_69_125 – Modulation of language-related networks during movie-viewing using whole-head fNIRS, Isabel Nichoson, Haskins and Yale School of Medicine

PS2_78_249 – High-density, multi-distance fNIRS for improved detection of frontotemporal activation during Verbal Fluency Task, Jessica E Anderson, Boston University

PS3_70_347 – Detection of Low-to-High Level Auditory Processing Using fNIRS Was Associated with Good Outcome in an Unresponsive Patient, Reza Moulavi-Ardakani, Western University

PS1_14_32 – Towards a fully integrated Smart Textile patch-based cap for multi-distance CW fNIRS whole-head imaging, Christian Bartkowski, NIRx Medical Technologies

PS2_74_244 – The role of theory of mind in childrens lying behavior: A functional near-infrared spectroscopy (fNIRS) study, Yibiao Liang, University of Massachusetts Boston

PS2_38_186 – Using fNIRS to investigate the neural correlates of distraction in 8-month-old infants, Giulia Serino, University of London

PS1_23_47 – Characterization and detection of intracranial pressure alterations by hybrid diffuse optics in benign external hydrocephalus children, Susanna Tagliaabue, ICFO-Institut de Ciències Fotòniques

PS3_74_357 – Concurrent associations between parent-infant interactions and cortical selectivity to social auditory and visual stimuli in 5-month-old infants: a preliminary study, Dianna Ilyka, University of Cambridge

PSV_13_172 – A comparative study on the global topological properties of the human brain at rest with simultaneous fMRI and fNIRS, Victor Sanchez, University of Campinas

PSV_08_112 – LIONirs: flexible Matlab toolbox for fNIRS data analysis, Julie Tremblay, Anne Gallagher, Université de Montréal

PS3_45_310 – The neural correlates of metaphor: An fNIRS Study, Anna Schwartz, Northeastern University
October 6, 2022

Zoom Poster Blitz Session 3: 8:00-9:00 AM EDT
3 minutes oral presentations

Session Chairs: **Haijing Niu**, Beijing Normal University, China, **Fen Zhang**, ICFO, Spain

PS2_33_181 – *Functional Brain Connectivity in Infancy and Cognitive Outcomes at 3 Years*, Carly Tiras, Boston Children’s Hospital

PSV_38_319 – *Comparing motion correction techniques for resting-state functional connectivity analysis in compliant healthy adults*, Costanza iester, University of Genoa

PS1_30_58 – *Functional human brain mapping in adults with whole-head ultra-high-density diffuse optical tomography*, Morgan Fogarty, Washington University in St. Louis

PS2_50_204 – *Short-separation Regression Incorporated Diffuse Optical Tomography (SS-DOT)*, Yuanyuan Gao, Boston University

PS1_51_92 – *Effects of red blood cell transfusion on cerebral oxygenation and perfusion of preterm neonates*, Caterina Amendola, Politecnico di Milano


PS3_09_246 – *Whole-head high-density diffuse optical tomography in infants*, Liam H. Collins-Jones, University College London

PS3_50_315 – *Functional connectivity during subjective audio quality assessments: An fNIRS study*, Kazuma Okamoto, Chuo University

PS1_66_121 – *Diffuse Optical Detection of Intracranial Hypertension in a Piglet Model of Hydrocephalus*, Wesley B. Baker, Children’s Hospital of Philadelphia

PS1_10_27 – *Moving towards naturalistic infant fNIRS – A Pilot Study*, Aleksandra A. W. Dopierala, University of British Columbia

PS2_69_230 – *A deep convolutional neural network for estimating HRF with reduction of motion artifacts in fNIRS*, Sungho Tak, Korea Basic Science Institute

PS2_68_229 – *Unravelling the stimulus-evoked fNIRS responses in sleeping infants*, Gautam Balasubramanian, Bionics Institute
GatherTown

From October 3 to October 12, 2022, all posters will be available for viewing to all attendees in GatherTown.

Virtual posters will be presented on October 7, 2022, between 8:00-10:00 AM EDT. You may also meet presenters of all posters on October 3-7, 2022, between 9:00 and 11:00. Check the chat about individuals schedule, and feel free to set a poster viewing session by posting in the chat.

Instruction on how GatherTown works can be found here: https://fnirs.org/events/conferences/fnirs-2022-schedule/fnirs-2022-gathertown-posters/fnirs2022-gathertown-instructions/

The link to GatherTown webpage can be found at: https://fnirs.org/events/conferences/sfnirs-2022-virtual-program/fnirs2022-links-to-gathertown-and-zoom-sessions/
The access is restricted to Conference registrants.

Acknowledgments:
SfNIRS GatherTown was created by Dr. Fen Zhang in 2021. She modified it for fNIRS 2022. We all thank her for all the work on making and maintaining this page!!! The park, bar and beach at the SfNIRS GatherTown were named by Professor Ilias Tachtsidis in 2021.

If there are any technical issues with this Gather Town platform during the conference, please contact: fen.zhang@icfo.eu or admin@fnirs.org
fNIRS 2022
Posters
Poster Session 1
Monday - October 10, 2022

In-person: 12:00-2:00 PM EDT

PS1_01_304 - Synesthetic V4 activation by achromatic stimuli measured using fNIRS, Linden Williamson, Texas Lutheran University

PS1_02_10 – Wearable fNIRS device for high-density measurement realized by triangular bidirectional optode arrangement, Hiroshi Kawaguchi, National Institute of Advanced Industrial Science and Technology

PS1_03_11 – Improving hemodynamic responses by predicting physiological signals, So-Hyeon Yoo, Pusan National University

PS1_04_13 – Coupling of peripheral and cerebral hemodynamics across wake and light NREM sleep, Vidhya Vijayakrishnan Nair, Purdue University

PS1_05_16 – How much do time domain fNIRS moments improve estimation of brain activity over traditional fNIRS?, Antonio Ortega-Martinez, Boston University

PS1_06_374 – fNIRS Assessment of the Differential Response to Speech and Noise Stimuli in Healthy Adults, Stefan A. Carp, Massachusetts General Hospital

PS1_07_19 – Neural correlates of audio-tactile speech perception, Alina Schulte, Eriksholm Research Center

PS1_08_20 – A 256-Channel SPAD Detector for Time-Gated fNIRS and DCS, Tom Cheng, Massachusetts Institute of Technology

PS1_09_24 – Choosing an optimal wavelength to detect brain activity in functional near infrared spectroscopy, Xiaojun Cheng, Boston University

PS1_10_27 – Moving towards naturalistic infant fNIRS – A Pilot Study, Aleksandra A. W. Dopierala, University of British Columbia

PS1_11_28 – Infant fNIRS brain responses at participant level, Anna Blasi Ribera, University College London
PS1_12_30 – Fast Decoding of Attended Spatial Location during Complex Scene Analysis, Matthew Ning, Boston University

PS1_13_31 – Towards the integration of CW fNIRS and absolute oximetry: A proof of concept, Lin Yang, NIRx Medical Technologies

PS1_14_32 – Towards a fully integrated Smart Textile patch-based cap for multi-distance CW fNIRS whole-head imaging, Christian Bartkowski, NIRx Medical Technologies

PS1_15_33 – Exploration of whole-head CW fNIRS-based intracranial hemorrhage detection: progress and challenges, Alexander von Lühmann, NIRx Medical Technologies

PS1_16_35 – Dont Panic! A Hitchhikers Guide to fNIRS Data Analysis for Block-Design Paradigms, Franziska Klein, Carl von Ossietzky University of Oldenburg

PS1_17_36 – Application of new frequency-domain data types to imaging of tissue in near-infrared spectroscopy, Angelo Sassaroli, Tufts University

PS1_18_38 – Brain in plastic, its fantastic: Cochlear implantation reduces cross-modal neural activity in infants and toddlers with hearing loss, Irene Arrieta, Universidad del País Vasco

PS1_19_39 – Blood Flow Estimation with Diffuse Correlation Spectroscopy to Study Flowrate, Tissue, and Noise Effects, Luis Gomero | Meltem Izzetoglu, Villanova University

PS1_20_40 – Cortical activity evoked by synchronised vs. non-synchronised peer observers as detected with fNIRS, Ryssa Moffat, Macquarie University

PS1_21_42 – Development of Language Networks during Infancy: Evidence from Resting State Functional Connectivity, Ishara Paranawithana, Bionics Institute

PS1_22_45 – Individual Prediction of Transcranial Photobiomodulation on Improving Cognitive Performance: Graph Convolutional Neural Network, Xiujuan Qu, Beijing Normal University

PS1_23_47 – Characterization and detection of intracranial pressure alterations by hybrid diffuse optics in benign external hydrocephalus children, Susanna Tagliaabue, ICFO-Institut de Ciències Fotòniques

PS1_24_49 – The PIPKIN study: imaging the neonatal brain in the home setting using high-density diffuse optical tomography, Borja Blanco, University of Cambridge
PS1_25_51 – *Examining the relationship between dimensional label learning and executive function*, Aaron T. Buss, University of Tennessee

PS1_26_52 – *Longitudinal effects of functional plasticity during rehabilitation with fNIRS: a case study*, Sergio Luiz Novi Junior, Western University

PS1_27_53 – *Functional Brain Measurements with Dual-Slope Frequency-Domain Near-Infrared Spectroscopy*, Giles Blaney, Tufts University

PS1_29_57 – *Ipsilateral motor control of prosthesis during first use*, Kaitlin Fraser, University of Nebraska Omaha

PS1_30_58 – *Functional human brain mapping in adults with whole-head ultra-high-density diffuse optical tomography*, Morgan Fogarty, Washington University in St. Louis

PS1_31_61 – *Implementing high density diffuse optical tomography to measure infant brain function in rural Gambia: a pilot study*, Samantha McCann, King’s College London

PS1_32_63 – *Utilizing fNIRS to investigate effects of varied thermal increasing rates on offset analgesia hemoglobin responses*, Ziyuan Wu, Boston Children’s Hospital

PS1_33_64 – *High Cognitive Load Needs Greater Brain Signal Variability: A Functional Near Infrared Spectroscopy Study*, Hong Li, Beijing Normal University

PS1_34_66 – *Age-related Changes in Diffuse Optical Tomography Sensitivity Profiles from Infancy to Adulthood*, Xiaoxue Fu, University of South Carolina

PS1_35_67 – *Activation of parietal lobe activity during Flow experience*, Ryo Takehara, Meiji University

PS1_37_70 – *Brain Network Analysis based on Hemodynamic Response during HD-tDCS in Stroke Patients: An fNIRS Study*, Gihyoun Lee, Sungkyunkwan University

PS1_38_72 – *Upper/lower limbs motor cortex functional activation vs. systemic superficial hemodynamics variations by TD-fNIRS*, Michele Lacerenza, Politecnico di Milano
PS1_39_73 – Combined functional diffuse correlation spectroscopy and electroencephalography as a new tool in developmental neuroscience, Fen Zhang, ICFO-Institut de Ciències Fotòniques

PS1_40_74 – Prefrontal cortex activation in preschoolers naturalistic goal management, Paola Pinti, Birkbeck and University College London

PS1_41_75 – Physiological Contamination and Headset Stability during Whole-body Movements: Validation of the MedelOpt® fNIRS System, Emeline Mullier, Université de Lille

PS1_42_76 – Evidence-based methodological recommendations for fNIRS motor paradigms, Marion Vincent, Université de Lille

PS1_43_77 – Cortical Activation during signal leg stance in Alpine skier using fNIRS A case study, Haroon Khan, OsloMet – storbyuniversitetet

PS1_44_79 – A miniaturized sensor board for enhanced laser safety and data quality assessment for functional near-infrared and diffuse correlation spectroscopy probes, M. Atif Yaqub, ICFO-The Institute of Photonic Sciences

PS1_45_80 – Measuring cognitive flexibility in the infant population with wHD-DOT and eye-tracking, Addison D.N. Billing, Cambridge University

PS1_47_84 – Transcranial Doppler and multimodal optical monitoring of cerebral perfusion during transient hypotension, Leena Shoemaker, Western University

PS1_48_87 – Brain functional connectivity of neonates with hypoxic ischemic encephalopathy post therapeutic hypothermia: a resting-state fNIRS study, Lingkai Tang, Western University

PS1_50_90 – Effects of Psychological Pressure on Working Memory Performance: An fNIRS study, Mako Fujita, Shibaura Institute of Technology

PS1_51_92 – Effects of red blood cell transfusion on cerebral oxygenation and perfusion of preterm neonates, Caterina Amendola, Politecnico di Milano

PS1_52_93 – Longitudinal Associations of Temperament and Resting-state Profiles in Young Children, Jacqueline Sullivan, The University of Tennessee, Knoxville

PS1_53_94 – The efficacy of Functional Near-Infrared Spectroscopy (fNIRS) in assessment of subjects with pigmented skin, Sizwe Zondo, Rhodes University
PS1_54_95 – Implementing immersive virtual reality and wearable fNIRS to test the development of empathy in toddlers, Chiara Bulgarelli, Birkbeck, University of London

PS1_55_96 – Neural and Behavioral Responses to Talking Faces in Noise, Mark Tiede, Haskins Laboratories

PS1_56_97 – Objectifying meaningfulness in activities by measuring prefrontal cortical oxygenation: a pilot study, Ellen Cruyt, University of Ghent

PS1_57_98 – Validating the single-subject reproducibility of the neural correlates of movie viewing/listening in fNIRS, Matthew Kolisnyk, Western University

PS1_58_101 – Diversity, Equity, and Inclusion: Preliminary Results from a Survey of the SfNIRS Community, Meredith Pecukonis, Boston University

PS1_59_102 – Using fNIRS to predict speech understanding outcomes in infants, Samantha C. Harrison, The University of Nottingham

PS1_60_108 – Development of cortical processing of dynamic bodies in infancy, Megumi Kobayashi, Niigata University

PS1_62_110 – Infantsbrain activity to cartoon faces investigated by functional near-infrared spectroscopy, Nanako Yamanaka, Chuo university

PS1_63_111 – Exploration of brain activation signals related to golf-putting performance under psychological pressure: A functional near-infrared spectroscopy study, Hiroki Sato, Shibaura Institute of Technology

PS1_64_114 – Near-infrared spectroscopy in Dementia: A Systematic Review, Emilia Butters, University of Cambridge

PS1_65_119 – Phantom Limb Therapy Provides Clinical Benefits after Amputation and Targeted Muscle Reinnervation Surgery, Jordan A Borrell, University of Nebraska at Omaha

PS1_66_121 – Diffuse Optical Detection of Intracranial Hypertension in a Piglet Model of Hydrocephalus, Wesley B. Baker, Children’s Hospital of Philadelphia

PS1_67_122 – Alterations in motor cortical connectivity due to short-term immobilization of an upper limb: an FNIRS case study, Arun Karumattu Manattu, University of Nebraska at Omaha
PS1_68_123 - Using fNIRS and TMS to detect and disrupt changes in visual processing of faces, J. Adam Noah, Yale University School of Medicine

PS1_69_125 - Modulation of language-related networks during movie-viewing using whole-head fNIRS, Isabel Nichoson, Haskins and Yale School of Medicine

PS1_70_128 - FNIRS response to Eye-to-eye contact predict ASD using support vector machine learning, xian zhang, Yale university

PS1_72_130 - The reproducibility of infant fNIRS studies: a meta-analytic approach, Jessica Gemignani, University of Padova

PS1_73_131 - Multi-wavelength Multi-distance Diffuse Correlation Spectroscopy System for assessment of premature infants cerebral hemodynamics, Nikola Otic, Massachusetts General Hospital

PS1_74_133 - Detecting Residual and Covert Consciousness Using fNIRS in the Intensive Care Unit, Androu Abdalmalak, Western University

PS1_75_137 - Quantifying Contribution of fNIRS Signal Components during Resting and Hypercapnic States, Pratusha Reddy, Drexel University

PS1_77_139 - Validating fNIRS-based Resting State Functional Connectivity Networks Against fMRI, Karnig Kazazian, Western University

PS1_78_142 - Localizing the Social Brain Network in Human Infants, Zohreh Soleimani, University of British Columbia

PS1_79_144 - Automatic classification of attentional processing during Stroop task and meditation using fNIRS features, Michael Sommeling, Villanova University

PS1_80_145 - Detecting interpresence is hard. Reports of a finding Wally-paradigm including fNIRS, NUUNA and physics, Niclas Kaiser, Umeå University

PS1_81_156 - Surface-based parcellation for longitudinal fNIRS studies, Abigail L. Magee, Washington University in St Louis

PS1_82_163 - Neurovascular coupling in the developing neonatal brain at rest, Wallois Fabrice, Université de Picardie
PS1_83_217 – Mapping brain function during gross motor imitation in children with autism spectrum disorder using high-density diffuse optical tomography, Dalin Yang, Washington University in St. Louis

PS1_84_236 – Neural Underpinnings of Face Processing During Online Video Calling, Uzair Hakim, University College London

PS1_85_240 – Defining regions of interest for fNIRS analyses in the Brain Imaging for Global Health project, Liam H. Collins-Jones, University College London

PS1_86_272 – What is special about being watched? Investigating audience effects using fNIRS, Isla Jones, University College London

PS1_87_274 – Measuring apnea progression and recovery in free divers through a self-calibrated SpO2 measurement, Alexander Ruesch, Carnegie Mellon University

PS1_88_327 – Cortical hypoxia in people with secondary progressive multiple sclerosis: demonstration with multi-wavelength time-domain near-infrared spectroscopy, Frédéric Lange, University College London

PS1_89_340 – Data Quality Assessment for Infant fNIRS Data, Samuel Montero-Hernandez, University of Houston

PS1_90_364 – Resting state cerebral hemodynamics as measured using fNIRS predict problem behaviors in pediatric sleep disordered breathing, Heather Bortfeld, University of California, Merced
Poster Session 2  
Tuesday - October 11, 2022

In-person: 12:00-2:00 PM EDT

PS2_01_34 – Can the fNIRS community design a standard cap layout for uniform whole-head HD fNIRS coverage? A discussion., Alexander von Lühmann, Boston University

PS2_02_46 – Empirical evaluation of the effect of structural and physiological heterogeneities of the injured head on diffuse optical measurements, Susanna Tagliabue, ICFO-Institut de Ciències Fotòniques

PS2_03_48 – Cortical responses to social stimuli in infants at elevated likelihood of ASD and/or ADHD: a cross-condition study, Borja Blanco, University of Cambridge

PS2_04_85 – Altered functional connectivity patterns in term newborns with neonatal opioid withdrawal syndrome revealed by resting-state functional near-infrared spectroscopy, Lingkai Tang, Western University

PS2_05_134 – Assessing Residual Awareness in Patients with Disorders of Consciousness Using fNIRS, Androu Abdalmalak, Western University

PS2_06_140 – Assessing cortical responses to median nerve stimulation at the individual subject level: An fNIRS-fMRI comparison, Karnig Kazazian, Western University

PS2_07_146 – Are systemic physiological measurements necessary for mapping resting-state functional connectivity networks using fNIRS?, Sergio Luiz Novi Junior, Western University

PS2_08_147 – Improving brain sensitivity of diffuse correlation spectroscopy blood flow measurements with a three-layer model, Hongting Zhao, Georgia Institute of Technology

PS2_09_148 – Predicting stimulus informativity: an infant fNIRS-eye-tracking study, Tommaso Ghilardi, Radboud University

PS2_10_149 – A deep learning approach in diagnosing the resting-state of patients with mild cognitive impairment, Min-Kyoung Kang, Pusan National University

PS2_11_150 – Intelligent spatial-temporal feature extraction for high-density FD-fNIRS BCI, Robin Dale, University of Birmingham
PS2_12_151 – 2D image based-CNN Model for Classification of Motion Artifacts in fNIRS, Eunjeong Choi, Korea University

PS2_13_152 – VASCOVID: a hybrid diffuse optical platform for real time assessment of cerebral metabolic rate of oxygen consumption., Marta Zanoletti, ICFO-The institute of photonic sciences

PS2_14_154 – Implementation of BCI-based neurofeedback using fNIRS and VR: A pilot study, Hee Kyong Kim, Korea University

PS2_15_155 – Robust Photogrammetric Scalp Morphology Estimation for Optical Functional Neuroimaging, Abigail L. Magee, Washington University in St Louis

PS2_16_159 – A Review of fNIRS use in Olfactory Research, Natalie Gunasekara, University College London

PS2_17_160 – Broadband NIRS demonstrates the effects of iron deficiency and iron repletion on brain tissue oxygenation and metabolism, Ilias Tachtsidis, University College London

PS2_18_162 – Validating a virtual reality platform for capturing naturalistic neurocognitive developmental differences in children and adults, Paola Pinti, Birkbeck and University College London

PS2_19_164 – Pre-ictal neurovascular activity precedes onset of childhood absence seizure: DC potential shifts and its correlations with hemodynamic activity, Wallois Fabrice, Université de Picardie

PS2_20_166 – Correcting the effects of systemic physiology and motion artifacts on Granger causality analysis, Pradyumna Lanka, University of California, Merced

PS2_21_167 – The Impact of Cortical Oxygenation During Sleep-Disordered Breathing on Cognition: Preliminary Results from Simultaneous Near-Infrared Spectroscopy and Polysomnography Study, Makoto Kawai, Stanford University

PS2_22_169 – Statistically driven surface-based analysis of functional activation in fMRI-fNIRS integration, Augusto Bonilauri, Politecnico di Milano

PS2_23_170 – Data analysis pipeline for estimating blood flow index with a fiber-based speckle contrast optical spectroscopy system, Byungchan Kim, Boston University
PS2_24_171 - Mapping naturalistic listening using HD-DOT, Aahana Bajracharya, Washington University in St.Louis

PS2_25_173 - Comparison of photogrammetry and structured-light 3D scanning for digitizer-free localization of fNIRS channels, Tatsuya Suzuki, Meiji University

PS2_26_174 - Examining functional connectivity patterns in networks relevant to mental health outcomes in early childhood, Soo Lee, Boston Children’s Hospital

PS2_27_175 - Asymmetry of peripheral vascular biomarkers in ischemic stroke patients assessed using NIRS, Yingwei Li, Yanshan University

PS2_28_176 - Deep Learning-based Cerebral Hemodynamic Features Exploration of Thermal Grill Illusion, Chungho Lee, Daegu Gyeongbuk Institute of Science and Technology

PS2_29_177 - Development and Preliminary Testing of a Multi-Wavelength Wearable Diffuse Optical Tomography System, Georgina Leadley, University of Cambridge

PS2_30_178 - Examination of brain signal differences depending on selective attentional states in a dichotic listening task, Takumu Yamaguchi, Shibaura Institute of Technology

PS2_31_179 - Synchronization of brain activity associated with eye contact: Comparison of face-to-face and online communication, Ren Sato, Shibaura Insititute of Technology

PS2_32_180 - Effects of computer-assisted Cognitive Behavioral Therapy(cCBT) on anxiety and insomnia in patients undergoing functional endoscopic sinus surgery: An exploring study of frontal hemodynamic functions using fNIRS, Yang Yang, First hospital of Shanxi Medical University

PS2_33_181 - Functional Brain Connectivity in Infancy and Cognitive Outcomes at 3 Years, Carly Tiras, Boston Children’s Hospital

PS2_34_182 - Optimizing a two-layer method for hybrid diffuse correlation spectroscopy and frequency-domain diffuse optical spectroscopy cerebral measurements in adults, Rodrigo M. Forti, Children’s Hospital of Philadelphia

PS2_35_183 - Intergroup bias in smile discrimination and mentalizing: A fNIRS study, Ruihan Wu, University College

PS2_36_330 - Computed Tomography Based Head Modeling for High-Density Diffuse Optical tomography, Monalisa Munsi, Washington University School of Medicine
PS2_37_185 – Investigating effects of Modulation Frequency for High Density Diffuse Optical Tomography in Neonates, Weihao Fan, Washington University in St. Louis

PS2_38_186 – Using fNIRS to investigate the neural correlates of distraction in 8-month-old infants, Giulia Serino, University of London

PS2_39_187 – Influence of curvature on the absolute quantification with frequency-domain Diffuse Optical Spectroscopy, Giovani G. Martins, University of Campinas

PS2_40_189 – Investigating Mother-Child Inter-Brain Synchrony with a naturalistic paradigm: An fNIRS hyper scanning study, Efstratia Papoutselou, Nottingham Hearing Biomedical Research Unit

PS2_41_192 – Reproducibility of motor task-based fNIRS and comparison with functional MRI in healthy adults, Nolwenn Jégou, Université de Rennes

PS2_42_193 – Decreased Exercise-Induced Changes in Prefrontal Cortex Hemodynamics are Associated with Depressive Symptoms, James Crum, University College London

PS2_43_195 – Hemodynamics of Speech-evoked Neural Networks in Adults: an fNIRS Study, Yingying Wang, University of Nebraska-Lincoln

PS2_44_196 – Multi-class task classification using functional near-infrared spectroscopy, Danushka Bandara, Fairfield University

PS2_45_197 – A Noise Model for Fiber-based Speckle Contrast Optical Spectroscopy, Sharvari Zilpelwar, Boston University

PS2_46_199 – Do motion artifact correction algorithms correct motion? : direct observation of motion-induced variance after correction, Jihyun Cha, OBELAB Inc.

PS2_47_201 – Assessing the impact of the systemic physiological activity: a multi-paradigm fNIRS study, Michael Lührs, University of Coimbra

PS2_48_202 – Removing the noise in fNIRS signals caused by IR trackers, Musa Talati, University College London

PS2_49_203 – Quantification of the diverse effect of hair and skin properties on fNIRS signal quality, Meryem A Yucel, Boston University
PS2_50_204 - **Short-separation Regression Incorporated Diffuse Optical Tomography (SS-DOT)**, Yuanyuan Gao, Boston University

PS2_51_206 - **A Novel FNIRS Task to Measure Implicit Brand Associations**, Kazue Hirabayashi, Shiseido Co., Ltd.

PS2_52_208 - **Towards a broadband NIRS devices specification for accurate measurement of cytochrome-c-oxidase**, Rachel Hudson, University of Cambridge

PS2_53_211 - **Cluster-based random field theory fails to control the family-wise error rate in optical neuroimaging**, Brian R. White, MD, PhD, The Children’s Hospital of Philadelphia

PS2_54_213 - **Effect of age on cognitive and cerebral activity during a rapid-event inhibition task**, Cindie De Faria, Université Fédérale de Toulouse

PS2_55_214 - **Are babiescries already language?**, Caroline Nallet, University of Padua

PS2_56_215 - **Pre-Registered Protocol: does self-touch causes oxytocinergic changes in cerebral activation?**, Sabrina von Au, Deutsche Sporthochschule Köln

PS2_57_216 - **Combined eye-tracking, fNIRS, and EEG suggests eye movements impact neural processing during real face viewing**, Megan Kelley, Yale School of Medicine

PS2_58_218 - **Neuromonitoring of neonatal cardiopulmonary bypass with high-density diffuse optical tomography**, Dalin Yang, Washington University in St. Louis

PS2_59_219 - **Design considerations for a speckle contrast optical tomography system using cost-efficient multi-mode fiber bundles for human neuroimaging**, Chen-Hao P. Lin, Washington University In St. Louis

PS2_60_220 - **Neuroscience in the everyday world: Brain correlates of naturalistic discourse in individuals with aphasia**, Emily J Braun, Boston University

PS2_61_221 - **Increased neural coupling and ratings of subjective connection during face-to-face gaze and harmonious music**, Amanda Watts | AZA Stephen Allsop, Yale University

PS2_63_223 – Where’s The Treasure? Working Memory in Toddlers, Caitie Busch | Megan Rothberg, Boys Town National Research Hospital

PS2_64_224 – Densifying Optodes Montage to Enhance Cerebellar fNIRS, Giulia Rocco, Université Côte d’Azur

PS2_65_225 – Sex Differences in Neural Profiles of Toddlers at Risk for Attention-Deficit Hyperactivity Disorder (ADHD), Haylee Hudson, Boys Town National Research Hospital

PS2_66_227 – Fuzzy neurofeedback induces designed modulation, Mario De Los Santos | Felipe Orihuela Espina, Instituto Nacional de Astrofisica Optica y Electronica

PS2_67_228 – Fast and slow movement-related artifacts in fNIRS signal: what is a viable solution?, De’Ja Rogers, Boston University

PS2_68_229 – Unravelling the stimulus-evoked fNIRS responses in sleeping infants., Gautam Balasubramanian, Bionics Institute

PS2_69_230 – A deep convolutional neural network for estimating HRF with reduction of motion artifacts in fNIRS, Sungho Tak, Korea Basic Science Institute

PS2_70_231 – Brain perfusion diagnostics in patients with ischemic stroke using near-infrared spectroscopy: A case study, Ah-song Jang, Korea university

PS2_71_232 – Improving EEG Source Reconstruction Accuracy Using DOT-derived Spatial Priors, Jiaming Cao, Carnegie Mellon University

PS2_72_9 – Investigating discourse comprehension in individuals with and without acute left hemisphere stroke an fNIRS pilot study, Hana Kim, Johns Hopkins School of Medicine

PS2_73_243 – Integration of motion sensors with wearable high density diffuse optical tomography, Elisabetta Maria Frijia, University College London

PS2_74_244 – The role of theory of mind in childrens lying behavior: A functional near-infrared spectroscopy (fNIRS) study, Yibiao Liang, University of Massachusetts Boston

PS2_75_245 – Hemodynamic correlates of spoken word production and auditory word comprehension using fNIRS, Lindsay K. Butler, Boston University
PS2_76_247 - Augmented reality system for indicating probe position on the head surface directly above the interested cortical region, Hiroshi Kawaguchi, National Institute of Advanced Industrial Science and Technology

PS2_77_248 - An optical modelling assessment of brain sensitivity in dementia with atrophy, Liam H. Collins-Jones, University College London

PS2_78_249 - High-density, multi-distance fNIRS for improved detection of frontotemporal activation during Verbal Fluency Task, Jessica E Anderson, Boston University

PS2_79_251 - Impact of Neonatal Brain Injury on Neural Functional Activity, Frederic Lange, University College London

PS2_80_253 - Shining Light into Paediatric HIV: HIV Neurocognition and Brain Plasticity in Sub-Saharan Africa: An fNIRS Study, Sizwe Zondo, Rhodes University

PS2_81_259 - The NIRS Brain AnalyzIR Toolbox, Hendrik Santosa, University of Pittsburgh

PS2_82_260 - Multivariate hidden Markov models for decoding activity states in functional near infrared spectroscopy, Timothy P. Nolan, University of Pittsburgh

PS2_83_261 - Learning in Social Interaction: a Multimodal Hyperscanning Study, Sara De Felice, University College London

PS2_84_264 - Using fNIRS to monitor frontal hemodynamic responses during Electroconvulsive Therapy, Jeremy Miller, Department of Psychiatry, University of New Mexico Health Science Center

PS2_85_269 - A simple and robust tool to calculate heart rate from fNIRS data post-hoc, Isla Jones, University College London

PS2_86_271 - High temporal resolution NIRS and DCS measurements at 3 cm separation, Kuan-Cheng Wu, Boston University

PS2_87_284 - Interpersonal fNIRS coherence during social interaction for children with and without autism spectrum disorder, Yigit Topoglu, Drexel University

PS2_88_302 - Associations between resting state functional connectivity and cognitive development during the first two years of life: an fNIRS study of poor Bangladeshi infants, Laura Pirazzoli, Boston Childrens Hospital
PS2_89_343 – *Effect of Optode Pressure on Quality of fNIRS Signals*, Samuel Montero-Hernandez, University of Houston

PS2_90_353 – *Cochlear implant users and normal-hearing listeners have contrasting hemodynamic changes during auditory beat processing despite similar behavioral responses*, Ali Rahimpour Jounghani, University of Southern California
Poster Session 3  
Wednesday - October 12, 2022

**In-person: 12:10-2:10 PM EDT**

PS3_01_71 – *Interbrain Network Analysis during Interactive Cognitive Task Based on fNIRS Hyper-scanning*, Gihyun Lee, Sungkyunkwan University

PS3_02_86 – *Comparison of preprocessing pipelines and the variability in neonatal functional connectivity: a resting-state fNIRS study*, Lingkai Tang, Western University

PS3_03_99 – *Functional connectivity development in Gambian infants over the first 2 years and its relationship with later cognitive flexibility and early growth measures*, Chiara Bulgarelli, Birkbeck University

PS3_04_136 – *Decoding Movie Identities from Human Brain Activity with High-Density Diffuse Optical Tomography*, Zachary E. Markow, Washington University in St. Louis

PS3_05_158 – *Comparison of methods for correcting the effects of temporal autocorrelation on resting-state connectivity*, Pradyumna Lanka, University of California, Merced

PS3_06_165 – *What triggers the interictal epileptic spike? A multimodal multiscale analysis of the dynamic of synaptic and non synaptic neuronal and vascular compartments using electrical and optical measurements*, Wallois Fabrice, Université de Picardie

PS3_07_194 – *Exercise-Induced Changes in Prefrontal Cortex Hemodynamics are Associated with Chronic Increases in Physical Fitness*, James Crum, University College London

PS3_08_238 – *Comparing pre-processing pipelines for fNIRS data*, Uzair Hakim, University College London

PS3_09_246 – *Whole-head high-density diffuse optical tomography in infants*, Liam H. Collins-Jones, University College London

PS3_10_250 – *Complexity of broadband near infrared spectroscopy signals in term newborn infants relates to outcome following neonatal encephalopathy*, Ilias Tachtsidis, University College London

PS3_11_254 – *NeuroDOTpy: A Python Neuroimaging Toolbox for DOT*, Emma Speh, Washington University in St. Louis

PS3_13_256 – *Brain Activation Location in Young Monolingual and Bilingual Children During Inhibition Executive Functioning Tasks: An Exploratory fNIRS Study*, Matthew Cook, Utah State University

PS3_14_258 – *Brain space image reconstruction of functional near-infrared spectroscopy (fNIRS) using a novel Bayesian adaptive fused sparse overlapping group lasso (Ba-FSOGl) model*, Xuetong Zhai, University of Pittsburgh

PS3_15_262 – *How does having a chat change our (neural) experience of watching a movie together?*, Sara De Felice, University College London

PS3_16_263 – *A novel co-localized optode-electrode design for Multimodal fNIRS-EEG*, De’Ja Rogers | W. Joseph O’Brien, Boston University

PS3_17_265 – *Exploring the relationship between changes in spare mental capacity and multimodal (psycho)physiological measurements in a multitask environment*, Maykel van Miltenburg, Royal Netherlands Aerospace Centre

PS3_18_267 – *Using TD-fNIRS to measure hemodynamics during an altered state of consciousness*, Katherine Perdue, Kernel

PS3_19_268 – *Evaluating the importance of animacy and visual realism in social interactions using fNIRS*, Michaela Kent | Eva Deligiannis, Western University

PS3_20_270 – *Multivariate vs Bivariate Functional Connectivity with High-Density Diffuse Optical Tomography*, Wiete Fehner, Washington University in St. Louis

PS3_22_275 – *Investigating neural correlates of social distancing and cognitive load in dynamic real-world tasks*, Isla Jones, University College London

PS3_23_276 – *NIRS-PPG to assess cerebral vasculature health*, Kuan-Cheng Wu, Massachusetts General Hospital

PS3_26_279 – Classification of Multiple Sclerosis using fNIRS features in Machine Learning Framework, Peter Rokowski, Villanova University

PS3_27_280 – A Systematic Review of Optical Monitoring in Neonatal Seizures, Rachel Howard, University College London


PS3_29_288 – The effects of backchanneling and robot errors on social cognition in realistic human-robot interactions, Yigit Topoglu, Drexel University

PS3_30_289 – Systematic Review of fNIRS Studies Reveals Inconsistent Data Reporting Practices, Alexis McCraw, University of Tennessee

PS3_31_290 – Multistate Time-Multiplexed System for Functional Time-Domain Diffuse Correlation Spectroscopy with SNSPDs, Marco Renna, Massachusetts General Hospital

PS3_32_292 – Coherent Hemodynamics Spectroscopy for Cerebral Autoregulation in the Neurocritical Care Unit, Cristianne Fernandez, Tufts University

PS3_33_296 – Measuring pulsatile blood flow and volume during carotid endarterectomy, Alexander Isaac Zavriyev, Massachusetts General Hospital

PS3_34_297 – Functional near-infrared spectroscopy in virtual reality, Timothy P. Nolan, University of Pittsburgh

PS3_35_298 – Increased intra-hemispheric connectivity at older gestational ages in healthy newborns, Homa Vahidi, Western University

PS3_36_299 – Validation of an auditory cortex localizer task, Hannah Shatzer, Toronto Metropolitan University

PS3_37_300 – FANBIDS: Framework for Analysis of fNIRS with BIDS, Kevin Stubbs, Western University

PS3_38_301 – An on-board fNIRS instrument with custom ASIC AFE and its validation in multi-distance experiment, Alper Kilic, Tufts University
PS3_39_303 – The Neurobiological Mechanisms Underlying Gestures Role in Mathematical Learning, Amanda Seccia, University of Chicago

PS3_41_305 – Assessment of peripheral and cerebral hemodynamics in sickle cell disease, Brianna Kish, Purdue University

PS3_42_307 – Hyperacusis in Toddlers and Young Children at Risk for ADHD, Kaitlyn Marsh, Boys Town National Research Hospital

PS3_43_308 – Components derived from high-density diffuse optical tomography data during overt motor imitation, Sung Min Park, Washington University in St. Louis

PS3_44_309 – Relating Quality Metrics to Cardiac and Functional Activation, Kevin Stubbs | Homa Vahidi, Western University

PS3_45_310 – The neural correlates of metaphor: An fNIRS Study, Anna Schwartz, Northeastern University

PS3_46_311 – Wireless High-Density Diffuse Optical Tomography at the Intersection of Wearability and Resolution, Hannah DeVore, Washington University in St. Louis

PS3_47_312 – The space-time of effective neural connectivity for fNIRS, Alejandra Rocha Solache, Instituto Nacional de Astrofísica Óptica y Electrónica

PS3_48_313 – Cortical activation during fine motor movement of Parkinsons disease patients using fNIRS, Edgar Guevara, Universidad Autonoma de San Luis Potosi

PS3_49_314 – fNIRS analysis on belief-bias effects in event-related design, Kenta Nakazawa | Kazuma Okamoto, Chuo university

PS3_50_315 – Functional connectivity during subjective audio quality assessments: An fNIRS study, Kazuma Okamoto, Chuo University

PS3_51_316 – The Relationship of Second Language Proficiency and Cortical Activations during Word Translation, Wakana Kawai, Chuo University

PS3_52_317 – Validation study of experimental design of the Go/No-go Association Task using fNIRS, Hikari Tanaka, Chuo University
PS3_54_320 – The neonate brain's sensitivity to repetition-based structure: specific to speech?, Caroline Nallet, Washington University in St Louis

PS3_56_322 – The fNIRS Glossary Project, Katharina Stute, Chemnitz University of Technology

PS3_57_323 – Multiwavelength time-resolved NIRS as a tool for intraoperative cerebral perfusion assessment, Anna Gerega, Polish Academy of Sciences

PS3_58_326 – Cross-correlation of cerebral blood flow and oxygenation measured non-invasively in extremely premature infants, John Sunwoo, Massachusetts General Hospital

PS3_59_328 – Predicting English Proficiency of Japanese Learners by Cortical Activation Patterns, Keita Sugizaki | Wakana Kawai, Chuo University

PS3_60_331 – Neonatal brain temperature monitoring based on broadband near-infrared spectroscopy, Frédéric Lange, University College London

PS3_61_334 – Comparison of Live and Virtual Formats for Face Gaze: A Multimodal Investigation, Joy Hirsch, East China Normal University

PS3_62_335 – Simultaneous EEG-fNIRS to explore somatosensory prediction in the premature neonate brain, Anne-Lise Marais, Normandie Université

PS3_63_336 – fNIRS in Educational Research: Perspectives of the first studies in South Africa, Candida da Silva Ferreira Barreto, University of Johannesburg

PS3_64_337 – fNIRS in the Amazon: Data collection in a remote location from an under-studied population, Dan P Dewey, Brigham Young University

PS3_65_339 – Two-in-one system and behavior-specific brain synchrony during cooperative goal-free creation, Mingdi Xu | Yasuyo Minagawa, Keio University (GatherTown October 5 2022, 10:00 AM-12:00 PM EDT)

PS3_66_342 – Inter- and Intra-Region Functional Connectivity in Nonpharmacological Pain Management, Samuel Montero-Hernandez, University of Houston

PS3_67_344 – Accuracy and reliability of diffuse optical tomography resting-state functional connectivity measurements from the Kernel Flow fNIRS system, Mohammad Parsa Oveis, Keio University
PS3_68_345 – Neuroscience in the everyday world: Prefrontal regions associated with single-task and dual-task walking, Jaimie Girnis | Rini Kaplan, Boston University

PS3_69_346 – An fNIRS Platform for Precision Mental Health, Hadi Hosseini, Stanford University

PS3_70_347 – Detection of Low-to-High Level Auditory Processing Using fNIRS Was Associated with Good Outcome in an Unresponsive Patient, Reza Moulavi-Ardakani, Western University

PS3_71_349 – Phantom with two blood-lipid layers that simulate dynamic oxygen saturation changes and improvement to data analysis, Adam Liebert, Polish Academy of Sciences

PS3_72_351 – Revisiting Approximated Optical Properties for Cerebrospinal Fluid for Using the Diffusion Equation in Optical Brain Imaging, Aiden Lewis, Northeastern University

PS3_73_355 – Comparison of Methods for Detecting Motion Artifacts in fNIRS Signals, Samuel Montero-Hernandez, University of Houston

PS3_74_357 – Concurrent associations between parent-infant interactions and cortical selectivity to social auditory and visual stimuli in 5-month-old infants: a preliminary study, Dianna Ilyka, University of Cambridge

PS3_75_358 – Evaluating the Effect of Optical Couplers on fNIRS Light Delivery, Edward Xu, Northeastern University

PS3_76_359 – Personalized EEG/fNIRS: a promising tool to study whole-night sleep in epilepsy, Édouard Delaire, Concordia University

PS3_77_360 – Flexible High-Density NIRS Probe for Real-Time Monitoring of Dermal Hemodynamics, Cameron T. Hanan, University of Houston

PS3_78_361 – Standardization of fNIRS LSL Metadata Structure, Talukdar Raian Ferdous, University of Houston

PS3_79_362 – Neural correlates of Spatial-Numerical Associations in 7 months-old infants, Sabrina Brigadoi, University of Padova

PS3_80_363 – Cortical activation during proprioceptive stimulation and spontaneous movements in infants: Preliminary results, Claudio L Ferre, Boston University
PS3_81_365 – *Impact of interrupted schooling on the development of the brains capacity for reading*. Examining neural systems for reading in Syrian refugee children in Canada, Kaja Jasinska, University of Toronto

PS3_82_366 – *A standardized data ecosystem for fNIRS*. Stephen Tucker, Boston University

PS3_83_367 – *Prefrontal cortex activation predicts impulsiveness in children with sleep disordered breathing*. Heather Bortfeld, University of California, Merced

PS3_84_368 – *Can fNIRS Serve as Ground Truth for Validation of a Neurally-based, Source Localization Technique? Training Effect Matter!*. Ali Rahimpour Jounghani, Stanford University

PS3_86_371 – *Denoising fNIRS data using low-frequency time delay analysis: a fMRI-fNIRS study*. Alexandra Rene, McLean Hospital

PS3_87_372 – *An objective classification of hemodynamically significant patent ductus arteriosus in extremely low gestational age infants based on Echocardiographic data and continuous NIRS monitoring*. Alyssa Martin, Massachusetts General Hospital

PS3_88_373 – *Comparing Brain Perfusion Sensitivity between Diffuse Correlation Spectroscopy and Speckle Contrast Optical Spectroscopy*. Stefan A. Carp, Massachusetts General Hospital

PS3_89_375 – *Calibration of diffuse correlation spectroscopy blood flow index with baseline frequency domain diffuse optical spectroscopy*. Penaz Parveen Sultana Mohammad, University of South Florida

PS3_90_376 – *Effects of Extracorporeal Membrane Oxygenation (ECMO) Flow Rate Titration on Cerebral Hemodynamics after Cardiac Arrest: a Case Study in a Pediatric Swine Model*. Tiffany S. Ko, Children’s Hospital of Philadelphia
Virtual Posters

GatherTown: Friday October 7, 2022 8:00-10:00 AM EDT

PSV_01_12 – *The Role of Embodiment in Immersive Virtual Reality Learning: An fNIRS Investigation*, Jean P. Bodet III, University of Houston

PSV_02_15 – *Dose-response relationship of iTBS for prefrontal activation and executive function: A TMS-fNIRS study*, Bella B.B. Zhang, The Hong Kong Polytechnic University

PSV_03_18 – *A fNIRS Study on Different Problem Solving Strategies*, Mevhibe Sarcaolu, Istanbul Medipol University

PSV_04_21 – *Prediction of cognitive domains in Alzheimer patients by few fNIRS channels*, Hasan Onur Keles, Ankara University

PSV_05_78 – *Cortical Activation in Response to Speech in Quiet and amid Noise in Prelingually Deafened Cochlear Implant Users*, Yael Zaltz, Tel Aviv University

PSV_06_82 – *Developing a Machine Learning Pipeline to Assess the Severity of Hypoxic Ischemic Brain Injury in Newborns*, Danai Bili, University College London

PSV_07_107 – *Middle Cerebral Artery Stenosis Identification during Mini-Mental State Examination: An fNIRS Validation*, Yun-Hsuan Chen, Westlake University

PSV_08_112 – *LIONirs: flexible Matlab toolbox for fNIRS data analysis*, Julie Tremblay | Anne Gallagher, Université de Montréal

PSV_09_116 – *Broadband NIRS reveals protection of neuro-vascular and neuro-metabolic coupling by nimodipine in an animal model of cerebral small vessel disease*, Zhiyuan Yang, University College London

PSV_10_118 – *Changes in cerebral oxygenation and systemic physiology in good, moderate and poor performers of a verbal fluency task under blue light exposure*, Hamoon Zohdi, University of Bern

PSV_11_120 – *Different light colors do not cause the same effect: Exploring the impact of six colored light exposures on human cerebral hemodynamics and oxygenation*, Hamoon Zohdi, University of Bern
PSV_12_153 – **Markers of developmental disorders in children aged 6-10 years – a resting state study of oxygenation level of the brain**, Margaret Chojak, Maria Curie-Skodowska University

PSV_13_172 – **A comparative study on the global topological properties of the human brain at rest with simultaneous fMRI and fNIRS**, Victor Sanchez, University of Campinas

PSV_14_188 – **Evaluation of the relationship between brain activity and mental workload during brain training games by fNIRS**, Keiko Fukuda, Tokyo Metropolitan College of Industrial Technology

PSV_15_209 – **Analyzing Classification Performance of fNIRS-BCI for Gait Rehabilitation using Deep Neural Networks**, Huma Hamid, Air University

PSV_16_210 – **Classifying Inversion and Eversion Ankle Movements using fNIRS-BCI**, Iraj Kainat, Air University

PSV_17_233 – **LASSO Homotopy-Based Sparse Representation Classification for fNIRS-BCI**, Asma Gulraiz, Air University


PSV_19_241 – **Assessment of functional plasticity in children with cerebral palsy in response to robotic-assisted gait training**, David Perpetuini, University of Chieti-Pescara

PSV_20_257 – **Coupling of neural oscillations, haemodynamics and metabolism in the infant brain**, Maheen Siddiqui, University College London

PSV_21_266 – **Multidimensional fNIRS Signal Analysis with Canonical Polyadic Decomposition on an Adult Dataset**, Terrence M. Barnhardt, Florida Atlantic University

PSV_22_291 – **Number and hand action in the brain: An fNIRS study**, Mariagrazia Ranzini, University of Padova

PSV_23_83 – **Different executive function impairments in medication-naïve children with attention-deficit/hyperactivity disorder comorbid with oppositional defiant disorder and conduct disorder**, Ningning Liu, Peking University

PSV_24_324 – **Wavelet analysis of cerebral haemodynamic and metabolic changes during cardiac surgery**, Kirill Soulov, University of Queensland
PSV_25_325 – A low-cost, smartphone-based instant 3D scanning system for infant fNIRS/DOT applications, Yunjia Xia, University College London

PSV_26_332 – Neural Specificity in Perceiving Catchy Speeches and Its Contribution to Childrens Speech Development, Qin Qin Luo, The Chinese University of Hong Kong

PSV_27_348 – Towards an optical simulator for time-domain cerebral tissue oximetry, Aleh Sudakou, Polish Academy of Sciences

PSV_28_352 – Statistical methods in graphs with applications to fNIRS data, Amanda Yumi Ambriola Oku, Universidade Federal do ABC

PSV_29_369 – Using fNIRS to uncover the neural mechanisms of fatigue in older men and women, Oshin Tyagi, Texas A&M University

PSV_30_17 – On the Suitability of fNIRS for Measuring Load in Multiple Resources in the Brain, Emily Doherty, University of Colorado Boulder

PSV_31_129 – Examining neural mechanisms of attentional control in the context of activation and inhibition, Hollis Heim, University of Tennessee, Knoxville

PSV_32_234 – Decoding skeletal muscle force from hemodynamic responses of primary sensorimotor cortex, Hojeong Kim, Daegu Gyeongbuk Institute of Science and Technology

PSV_33_68 – Alterations of Hemodynamic Responses During Motor Learning Induced by High-definition Transcranial Direct Current Stimulation After Stroke: An fNIRS Study, Heegoo Kim, Sunkyunkwan University

PSV_34_109 – Does ‘peekaboo’ attracts infants?, Yuki Tsuji, Chuo University

PSV_35_277 – Feasibility of measuring prefrontal activation using fNIRS during a response inhibition task in Williams syndrome, Emma Condy, National Institute of Mental Health

PSV_36_370 – A modular design approach to build a portable small-animal cerebral blood flow imaging platform, Ria Paul, Indian Institute of Technology Bombay

PSV_37_318 – Study of bimanual coupling effect with functional Near Infrared Spectroscopy, Monica Biggio, Università degli studi di Genova
PSV_38_319 – Comparing motion correction techniques for resting-state functional connectivity analysis in compliant healthy adults, Costanza iester, University of Genoa

PSV_39_321 – Daily variations of resting-state functional Near Infrared Spectroscopy, Laura Bonzano, University of Genoa

PSV_40_273 – Infant and Adult Neural Response to Anthropomorphic Entities during Communicative Acts, Jacqueline Stotler, Florida Atlantic University
DEI Travel Award Recipients

The Recipients of the first SfNIRS Diversity Equity and Inclusion travel award are:

Sizwe Zondo, PhD student, Psychology, South Africa,
- PS2_80_253 – *Shining Light into Paediatric HIV: HIV Neurocognition and Brain Plasticity in Sub-Saharan Africa: An fNIRS Study*, Sizwe Zondo, Rhodes University

Asma Gulraiz, Masters student, Engineering, Pakistan,
- PSV_17_233 – *LASSO Homotopy-Based Sparse Representation Classification for fNIRS-BCI*, Asma Gulraiz, Air University

Alejandre Roche Solache, Masters student, Computer Science, Mexico,
- PS3_47_312 – *The space-time of effective neural connectivity for fNIRS*, Alejandra Rocha Solache, Instituto Nacional de Astrofisica Óptica y Electrónica

Ishara Paranawithana, PhD student, Engineering, Australia,
- PS1_21_42 – *Development of Language Networks during Infancy: Evidence from Resting State Functional Connectivity*, Ishara Paranawithana, Bionics Institute

Yumie Ambriola, PhD student Engineering, Federal University of ABC, Brazil,
- PSV_28_352 – *Statistical methods in graphs with applications to fNIRS data*, Amanda Yumi Ambriola Oku, Universidade Federal do ABC

Jamila Akhter, PhD student Engineering, Air University Islamabad,
- PSV_18_239 – *fNIRS-based Robotic Hand Gripping Control via Machine Learning Classifiers*, Jamila Akhter, Air University

Muhammad Atif Yaqub, Post doc, Engineering, Spain,
- PS1_44_79 – *A miniaturized sensor board for enhanced laser safety and data quality assessment for functional near-infrared and diffuse correlation spectroscopy probes*, M. Atif Yaqub, ICFO-The Institute of Photonic Sciences
Iraj Kainat, Masters student, Engineering, Pakistan, irajkainat777@gmail.com not registered yet
  •  PSV_16_210 – *Classifying Inversion and Eversion Ankle Movements using fNIRS-BCI*, Iraj Kainat, Air University

Huma Hamid, Masters student, Engineering, Pakistan, humahamid244@gmail.com not registered yet
  •  PSV_15_209 – *Analyzing Classification Performance of fNIRS-BCI for Gait Rehabilitation using Deep Neural Networks*, Huma Hamid, Air University

Edgar Guevara, Post doc, Engineering, Mexico, edgar.guevara@uaslp.mx
  •  PS3_48_313 – *Cortical activation during fine motor movement of Parkinsons disease patients using fNIRS*, Edgar Guevara, Universidad Autonoma de San Luis Potosi

Parsa Oveisi, Masters student, engineering, Canada, parsa.oveisi@gmail.com
  •  PS3_67_344 – *Accuracy and reliability of diffuse optical tomography resting-state functional connectivity measurements from the Kernel Flow fNIRS system*, Mohammad Parsa Oveisi, University of Toronto

Make sure to stop by at their posters and congratulate them!!!!
You can also see what Authors have submitted at: https://fnirs.org/events/conferences/fnirs-2022-schedule/fnirs-2022-author-index/. This list may be incomplete, it reports the list of authors as entered at submission.