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Brain-Computer-Interface Society

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Volume 2 Issue 1

BCI SOCIETY

Note from the president

Dear friends,

We are on eve of our long-awaited virtual BCI meeting, so don't miss the sections of this newsletter with information and updates about vBCI2021.

My tenure as President will come to an end immediately after vBCI2021, and I'm very happy that Jen Collinger, our current Vice-President, will become the next President of our BCI Society. I'd have loved to meet you in person during this year's conference to share the privilege and honor it has been to serve the Society and have your support, which has been particularly important to navigate the challenges imposed by the pandemic –your enthusiastic response to our initiatives made them easier, thank you so much!

Speaking about initiatives, the BCI Thursday over the last months has been a success, and this series will continue after vBCI2021. This newsletter contains a summary of the Next Generations events and Workshops. And, just a few weeks ago, we held our Annual General Assembly, where the Board of the BCI Society proudly shared with you the state of our Society, the many ongoing initiatives, and our plans for the in-person BCI International Meeting in 2022! If you missed this occasion to learn from, question, and provide feedback to the Board, please read further, as this newsletter will provide you with the most important information.

As always, don't hesitate to contact us with feedback and suggestions on its content. Looking forward to meeting you at vBCI2021!

José del R. Millán, President of the BCI Society

Walking and talking with the incoming president of the BCI Society

We interviewed our incoming President to ask about why she joined the Society, her work, and her plans with the Society.

While you are already well established in the BCI community and known by many of the BCI Society members, what initially motivated you to join the BCI Society?

At the time, I still felt like a newcomer to this field. I transitioned to BCI work after completing my PhD in biomechanics where my research focus was on injury prevention for manual wheelchair users with spinal cord injury. My BCI research is focused on the restoration of upper limb function so there are some common themes, but it was still a very different field than I was used to. The BCI Society appealed to me because it brought together scientists, engineers, and clinicians who shared a common goal of using neural interfaces to restore function for people with disabilities. I really enjoyed the BCI Meetings in Asilomar and the collaborative environment they fostered and so that motivated me to join the Society. I look forward to meeting even more members in my role as President.

Do you feel that the research and topics you have pursued throughout your career has been shaped by your involvement with the BCI Society?

Certainly. I have learned so much from this diverse community of BCI researchers. I appreciate the user-centered focus that the BCI

In this issue:

Highlights:

- Get to know your new president.
- Sneak preview of vBCI
- Awards nominations are open!
- BCI Journal is recruiting. Are you a candidate?
- Meet the newly elected board members.

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Interview with Dr. Collinger continued

community has when developing new technology and I try to incorporate that into my own work. I do not believe that there is a single definitive BCI technology that will meet the needs of every potential user. Therefore it is important for me to understand what technology and approaches exist so that I can understand where my own work fits in. I am always impressed by the creative and innovate ways that the BCI field approaches important scientific questions and advances the ability to use this technology for communication and mobility.

What motivated you to run for elections as a BCI board member initially and to then take on the task as the incoming BCI president?

I have to say that I was lucky enough to be encouraged by colleagues to take an active role in the Society and since then I have never looked back. It is really an honor to play a small role in shaping the future of the BCI field, which is a major goal of the BCI Society. Through the scientific meetings and other initiatives, we can encourage collaboration among BCI researchers in order to accelerate the development of BCI technologies that enable people to interact with the world. I hope to encourage the responsible development of technology that meets users needs and is accessible to all who need it. The members of the BCI Society are passionate about their work and it is great fun to work with the Board and members to advance the field of BCI.

What do you see as your main tasks and challenges as the new BCI Society president?

Our Society is growing and has taken on a number of new initiatives related to trainee development, recognition of excellence in our field, communication, and outreach. These initiatives, led by members of our Board and other volunteers, represent amazing opportunities and value for our members and I am excited to continue and expand these initiatives. I will encourage active participation from our Society members so that we can sustain these initiatives. I also hope to improve the participation from people who come from groups that have traditionally been underrepresented in our Society.

Additionally, there is increasing interest from industry and the public in BCI technology. I think that the BCI Society can play a role in promoting the responsible development of technology that can be translated into clinical applications. One way to do this is by ensuring that all stakeholders have a voice throughout the development process. The BCI Meetings are an excellent venue for identifying the major challenges, and potential solutions, facing our field. We will begin planning the 2022 meeting very shortly and I welcome suggestions for important topics that we should cover.

Interview with Professor Nick Ramsey

In each of the BCI Society newsletters, we aim to to put a senior BCI researcher in the spotlight. For this first newsletter, we asked the second president of the BCI Society, professor Nick Ramsey, to answer a list of interview questions about his career path, his research and his opinion on the latest developments in the field. We would like to thank professor Ramsey for his insightful and inspirational answers.

Could you tell us a bit about your background, education and career path until now? When and where did you join the BCI field? What is your current position and what is the composition of your research team?

I studied experimental psychology in Utrecht and obtained a PhD in psychopharmacology there in 1991. I then went to NIH on a fellowship and was involved in the early days of functional MRI. I returned to Utrecht where I coordinated fMRI research in psychiatry and epilepsy patients. Since 2008, I am professor at the neurosurgery department, with a focus on human brain function, electrocorticography and high-field fMRI. I got interested in BCI at SFN in 2003 or 2004, when I saw a poster on decoding brain activity in rats. I somehow found out about the Wadsworth center and attended the 2005 BCI meeting there. With my own research including intracranial recordings in the epilepsy monitoring program in Utrecht, I saw a unique opportunity to put our knowledge to good use for

severely paralyzed people. I obtained a grant for BCI research in 2007 and since then my team has worked on BCI implant technology (notably decoding algorithms). By pure coincidence, I met Tim Denison of Medtronic, who was working on sensing in their DBS device, and my team managed to get involved in defining some specs and testing his teams' prototype(s) by connecting it externally to the electrodes implanted

Interview with Professor Nick Ramsey continued

in our epilepsy patients. Tim's team managed to develop and implement all the features we needed for our BCI plan, which resulted in our successful implantation of the Activa PC+S system in Hanneke, a woman with late-stage ALS and a strong will to live, who we published on in 2016. My team consists of 3 research staff/assistant professors, 3 postdocs, 6 PhD students and about 5 master students from a wide range of disciplines (computer science to psychology), studying brain function, clinical brain mapping and BCI (www.utrecht-BCI.nl). Most of our research concerns BCI, ranging from user needs and ethics, to machine learning and implant prototyping. I am quite proud of our BCI program and team, with everyone playing a role in working with our participants and in developing what we call the next generation BCI where we aim to decode covert speech from sensorimotor cortex. We are well embedded in the clinic, which is crucial for our data collection (ECoG in tumor and epilepsy patients) and BCI implantation, and allows us to translate our knowledge of brain function to functional mapping procedures in the clinic. We have so far implanted three people with Locked-In Syndrome with a 4-channel device with which users can reliably generate mouse clicks ('brain clicks') to operate communication software, and plan to implant more with more capable devices in the coming years. I am also advisor to the Wyss Center for Bio and Neuro Engineering, which develops BCI implant hardware and software (https://wysscenter.ch), and director of startup company Braincarta for clinical fMRI (www.braincarta.com).

What attracts you to BCI research?

What attracted, and still attracts, me is the opportunity to put our acquired understanding of human brain function intracranial brain signals to good use, and the satisfaction of achieving exceptionally high decoding accuracy (>90%) as compared to what is the norm in neuroscientific research ($p<0.05$). Like putting money where your mouth is.

What, in your opinion, has/have been your most significant contribution(s) to the BCI field?

Above all I think the promotion of home use of implantable BCI systems, which is the hallmark of our BCI program. This requires thinking about reliability of decoding and understanding user needs and practical constraints (e.g., in what one can ask of caregivers to operate the BCI system), at the expense of increasing degrees of freedom to satisfy academic performance indicators. In addition, we decided early on to pursue not only scientific progress in working with implants in participants with LIS, but to also offer them a way to sustain the ability to communicate with a certain degree of independence as continued neurodegeneration would render all existing assistive technologies unusable. On another note, I think I helped the field by playing a role in establishing the BCI Society.

What do you enjoy most in your current position or in BCI research in general?

Having interacted with a wide range of stakeholders in the BCI field, notably via the BCI Society and the pre-Society meetings organized by the Wadsworth BCI group, I have learned a lot about the many forces at play. I understand for instance the tension between user needs and academic drive, between industrial goals and academic freedom, between regulation and innovation, and that helps me and the team to define and pursue common goals that accommodate a range of stakeholders with seemingly opposite objectives. Our Utrecht NeuroProsthesis program (www.neuroprosthesis.eu), for instance, depends heavily on collaboration between industry, academia, medicine, patient organizations, engineering and regulatory bodies. I very much enjoy being able to interact with, and bridge, the many different parties in trying to mature implantable BCI technology to a level where it is available as a clinical solution for people facing total paralysis.

What do you consider new important and positive developments in the BCI field?

I believe the evolution of hardware is at the heart of progress in the BCI field, whether it is energy-efficient implantable amplifiers or dry scalp electrodes. I think the largest gain lies in implantable systems, in terms of safety, miniaturization, low energy consumption, low cost and simplified implantation procedures. These developments are badly needed if BCI is to become a standard solution in the neurologists' portfolio worldwide, first for severe paralysis (primarily degenerative neuromuscular disorders such as ALS), and, once implants become more sophisticated, for people with impaired speech and mobility for instance following stroke. I am personally most excited about the growing research on decoding speech from the sensorimotor cortex.

What aspect or development worries you?

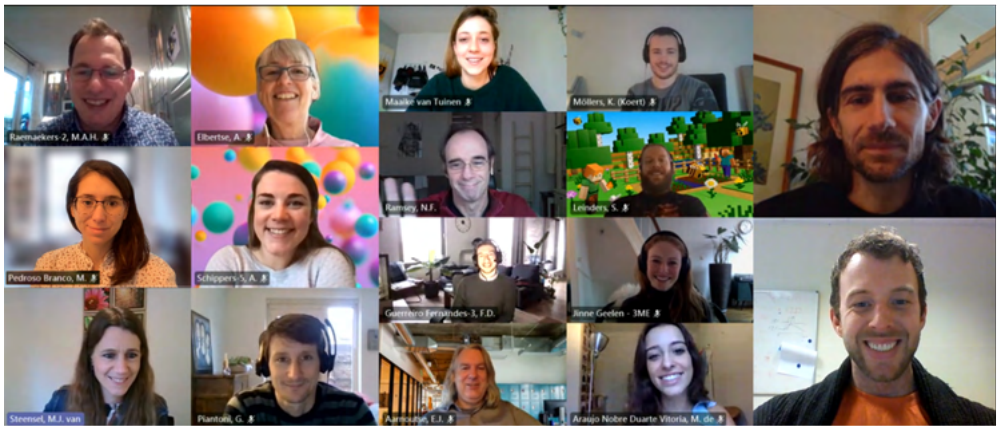
Through the years in the BCI field, I have seen the hurdles for commercial deployment of BCI implants stunt progress. With the current market for BCI implants being small, the growing need for companies to rapidly turn a profit due to the generally short horizon

Interview with Professor Nick Ramsey continued

associated with venture capital, and increasing regulatory constraints (especially in the EU), development has been disappointing. With some large companies stepping in, I hope safe devices become more widely available so that scientific development of BCI towards restoration of speech and use of limbs can accelerate. I foresee that most advances depend on research with paralyzed people, where research and function restoration (home use) go hand in hand. On another note, I, as many others in the BCI Society, worry about hypes around BCI. It causes society to become wary of an otherwise very promising field.

Your main research area is that of implantable BCIs. How far are we from actual clinical implementation of these devices? What steps are still necessary?

I believe that clinical implementation is utmost important for the BCI field to gain traction with society at large, a notion I share with others in the Society. I remember vivid discussions about this at the BCI meeting in Albany in 2005. Clinical implementation requires proof of reliable operation, alignment with user's needs, fool-proof implantation procedures for implants and, of course, safe and capable technology. A few companies and research institutes are testing or developing devices, which hopefully become available to other researchers, but their biggest challenge is regulatory approval for clinical use. I am aware of only one implant that is edging towards BCI for paralysis as an approved commercial use (the Stentrode), all others that I know of are intended for research because of the regulatory obstacles. Combining recording with stimulation capabilities seems to be an alternative strategy, since the device can then also be used for Deep Brain Stimulation in neurological disorders (much bigger market), but that concept generally does not require the number of electrodes and channels needed for BCI.



It seems to me that development of BCI systems is most likely to succeed with public funding, provided it includes the rather tedious trajectory of obtaining regulatory approval. With the cost of development and sufficient evidence of safety and functionality of a device covered, the chance of a company embarking on exploitation of it is much more likely. An additional issue often overlooked is adoption of BCI technology by the medical profession. Getting neurologists or rehabilitation physicians to accept BCI implants as a solution for their patients takes a lot of time and is quite likely to benefit from a policy of careful publicity devoid of unsubstantiated claims.

What is your opinion on the recent interest of large companies in the implantable BCI field?

This is a bit of a double-edged sword. In principle I think the field stands to benefit from devices that may become available from large companies and large investments. As I mentioned before, safe and capable devices are needed to further BCI research, so commercial availability, even if only for research, would be very helpful. However, there is a real risk that smaller companies and their investors shy away from BCI because of the large company efforts, with detrimental consequences if the latter do not deliver. The publicity can benefit the field, but may hurt it if claims of functionality do not materialize.

What advice would you give to junior researchers entering the BCI field now? Why should they all join the BCI Society?

The Society is young (it was founded in 2015) and the board changes every year (board members roll off after 3 years). The number of committees working on benefits and activities for members is growing substantially. That means there is a great opportunity for young researchers to be a part of the organization and exert influence. It is also a place to meet fellow scientists from a wide range of disciplines, which encourages cross-disciplinary thinking and research planning. Your international network grows rapidly with every meeting and creates exciting opportunities for collaboration, visiting labs and conducting research in other BCI labs. With the Society still being relatively small, it is very easy to interact informally with more senior members and increase your chances of getting a position in their lab, something that is almost impossible at larger societies and meetings. On top of all this, since BCI is exciting and on the rise, being a member is bound to make you feel you are part of a new movement.

Membership

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Become a Member or renew your BCI Society membership today

Membership in the BCI Society is open to all scientists, principal investigators, postdocs, and students from around the world involved in the many research and practical aspects of BCI research. We welcome all involved in BCIs, including engineers, doctors, therapists and business people.

What are some of the benefits for members?

- Discounted registration to the BCI Society Workshop Series
- Complimentary registration to the Next Generations events
- Complimentary registration to the Master Classes
- Access to member-only initiatives and activities
- Free access to the online edition of the International peer-reviewed journal Brain-Computer Interfaces

Our one or two-year membership cycle starts in January 2021!

For one year:

Student:	$65 USD
PostDoc:	$95 USD
Regular:	$135 USD

For two years:

Student:	$95 USD
PostDoc:	$145 USD
Regular:	$195 USD

For more information, please visit the BCI Society webpage http://bcisociety.org

Society News and Views

The 8th International BCI Meeting is just around the corner and will go virtual! The 2021 Virtual BCI Meeting will adhere to the traditional format and will present research contributed by our members.

The program features keynote lectures from distinguished international speakers, member-submitted individual oral presentations, innovative workshops and posters and networking events. Most presentations, including the plenary lectures and workshops, will be delivered live. Live sessions will be recorded and uploaded to the platform to provide on-demand viewing until September 1st. The virtual meeting will focus on creating an environment for fruitful, constructive and open exchanges. This vBCI2021 meeting will, like its predecessors, contribute greatly to BCI research and development. Want to take a peek? Here are our plenary speakers:

Plenary Speakers

Monday June 7th

Paul Sajda
Columbia University

Maryam M. Shanechi
University of Southern California

Tuesday June 8th

Steven Laureys
University of Liege

Program at a glance
Visit: https://bcisociety.org/bci-meeting

Wednesday June 9th

Sebastian Halder
University of Essex

Robert Gaunt
University of Pittsburgh

Thank you to the sponsors of vBCI2021:

BCI Society- Early Career Award – 2021 Call for Nominations

After the exciting inaugural edition of the BCI Society Early Career Award (ECA) in 2020, the winner of which focused specifically on the *translational* aspects of BCI research, the BCI Society is pleased to announce a new round of ECAs in 2021. Acknowledging the multidisciplinary character of the BCI field, this year's ECAs will focus on two other critical aspects of BCI research: *Neuroscience* and *Methods*. Nominees must have a history of scholarly work that has advanced the field. More specifically, the *ECA Neuroscience* recognizes an individual who has contributed significantly to scientific progress in understanding brain structure, brain function and/or brain signals related to BCIs. The *ECA Methods*, on the other hand, recognizes an individual who has contributed significantly to scientific progress in the development of algorithms, software and/or hardware related to BCIs. Both ECAs will be presented by the end of 2021. For more information, please go to bcisociety.org.

The BCI Society Next Generations series provides technical background on some cutting-edge topics in BCI research and, most importantly, aims at answering questions that trainees might have on these topics. Each session is composed of a 30-minute presentation followed by a 30-minute Q&A session, and is chaired by a member of the Postdoc and Student Committee of the BCI Society. This series has attracted over 200 attendees so far, and all online talks have been free for everyone to attend.

On January 21, 2021, Dr. Christian Herff from Maastricht University presented an overview on how to apply machine learning to BCI research. The session was chaired by Dr. Davide Valeriani. Dr. Herff covered both classification and regression problems, with hands-on examples using both invasive and non-invasive neural data. For instance, he explained how speech could be decoded from minimally-invasive neural recordings using machine learning. In the Q&A session, several topics were covered, including cross-validation, state-space models, and complexity of machine learning models. A recording of the session is available on Machine Learning for BCI | bcisociety.org.

On March 10, 2021, Dr. Jason Palmer from Osaka University presented an overview on EEG for BCI applications, including both what is EEG and how it works, and different techniques to analyze EEG data. The session was chaired by Nicole Dusang. Dr. Palmer explained that EEG does not measure the action potential of neurons, but the movement of ions in the extracellular fluid. He also explained the functional localization of the cortex, and the different types of electrodes used in EEG recordings. As for analytical techniques, Dr. Palmer presented an overview of signal processing methods for artifact rejection, such as independent component analysis, and analytical tools in both time and frequency domains, such as event-related potentials and brain connectivity. A recording of the session is available at https://bcisociety.org/event/eeg-analysis/.

On April 15, 2021, Dr. Amy Orsborn from the University of Washington introduced trainees to adaptive algorithms in invasive BCIs. The session was chaired by Dr. Sergey Stavisky. Dr. Orsborn explained the concept of closed-loop decoder adaptation in BCI applications, which allows to optimize algorithms in real-time to reduce errors when using BCIs. She presented the many design choices that have to be made when implementing an adaptive algorithm, such as the form of error signal used to guide algorithm retraining, the learning rules used to update the decoder, the timescale of decoder updates, and the decoder parameters to update. Dr. Orsborn also presented a case-study to facilitate the trainees to understand how to apply adaptive algorithms in BCI research. A recording of the session will be available soon at Adaptive BCI invasive | bcisociety.org.

On May 13, 2021, Dr. Serafeim Perdikis from the University of Essex, discussed the challenges of developing adaptive BCIs for non-invasive recordings. The session was chaired by Dr. Luke Bashford. In this session Dr. Perdikis identified machine learning, performance measures and other technical user-training challenges that need to be addressed towards effective non-invasive BCI adaptation, with references to possible solutions and their limitations. Furthermore, Dr. Perdikis discussed subject learning during co-adaptation, taking a critical viewpoint of the state-of-the-art and exploring results from recent work. A recording of the session will be available at https://bcisociety.org/event/adaptive-bci-non-invasive/.

We held 4 BCI Next Generation Thursdays with more than 200 participants from over 30 countries, along with 6 Workshops with more than 110 participants. Though the Workshops involved a fee, we were able to provide 19 scholarships. We would like to express our sincere thanks to all of our organizers, fund raisers, speakers and attendees who have made BCI Thursdays a success.

For future Workshops please stay tuned, keep a lookout on our webpage and please feel free to send us your ideas!

Featured Member Profile Pages

Did you recently join or start a new lab? Or did you finish your PhD? The Featured Member Profile pages are there for you to share your story with the BCI Society. If you are interested in being featured in one of the upcoming newsletters, please contact us via communications@bcisociety.org.

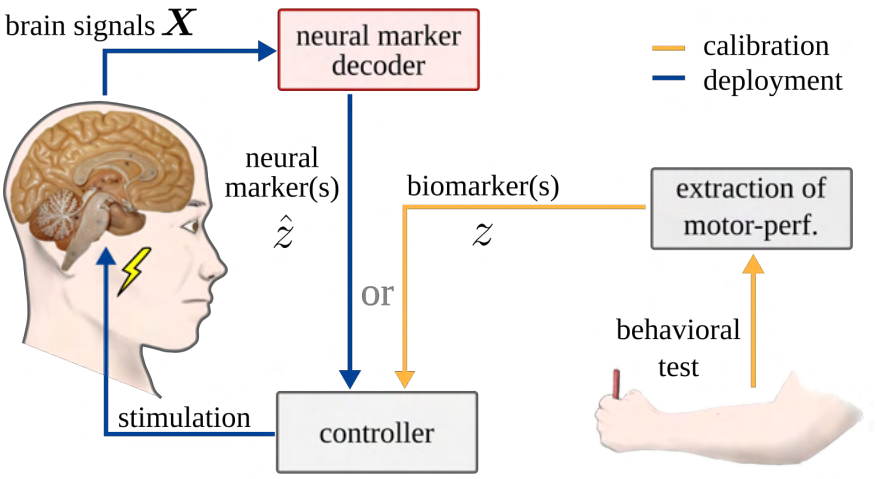
Michael Tangermann, PhD, Donders Institute for Brain, Cognition and Behaviour

Could you tell us about your new lab? Where is it? Who are part of it? How is it embedded in your institute?

I am very excited about the possibility to start a lab at the Donders Institute for Brain, Cognition and Behaviour, which is a research facility of the Radboud University in Nijmegen, The Netherlands. Together with my colleagues of the Artificial Intelligence Dept. we study novel learning algorithms. These algorithms range from novel neural network architectures to very specialized model classes capable to learn robustly from extremely small datasets, or if the features of the measured signals change over time (non-stationarity).

What are the main research projects in your new lab?

My group has a neurotechnology focus: we investigate machine learning methods, which allow to decode information from (invasive and non-invasive) brain signals and algorithms which can learn how stimulation needs to be applied in order to create beneficial brain states. We not only create such algorithms, but also put them to work in closed-loop systems that interact with the healthy or diseased brain. Of course this work has direct applications in the field of brain-computer interfaces, to which I feel attached since many years. Application-wise, I am extremely curious to further explore the assets of BCI-supported language rehabilitation for stroke patients, and how BCI methods can contribute to adaptive deep brain stimulation systems, which have the goal to reduce the burden of patients with, e.g., morbus Parkinson and major depression. Besides these clinical applications, I am always curious to explore novel BCI interaction modes, e.g., when humans and robots work together in a real-life scene.



Can you please tell us about your other new responsibilities, such as teaching?

Teaching-wise, I could directly contribute to the AI BSc program at the Donders with a course on signal processing, data analysis and BCI methods. In addition to this, I supervise BSc and MSc thesis projects, and PhD projects. Due to my transition from the Freiburg University to the Radboud University at the start of 2021, I de-facto currently take care about two labs. While this can be challenging at times, it is also highly interesting to compare, how the university systems differ between Germany and The Netherlands.

Do you have any funding sources that you would like to thank?

Without public funding from the DFG and BMBF, my work would not have been feasible and I am thankful for this. However, I also want to mention, that without the constant support by my clinical partners and many, many healthy study participants and patients, I could not have done this research. Thanks a lot to all of you!

BCI Society Committee Updates

Awards Committee

Since the previous newsletter, the Awards Committee has worked on designing a nice, physical award, which will be handed to Sebastian Halder, the 2020 Early Career Award (ECA) winner, during vBCI2021. We very much look forward to his lecture in the dedicated Awards Session! Also, we have developed plans for upcoming BCI Society Awards.

With the board of the BCI Society, we have agreed on a new round of Early Career Awards in 2021 and to target later career stages and service to the BCI community by handing out a Lifetime Achievement Award (LAA) in 2022. For the 2021 ECA, we aim to focus on the multidisciplinary character of the BCI field and explicitly acknowledge the different factors that play a role to accomplish BCI applications. Therefore, the 2021 ECA will have two categories, one for early career researchers working on algorithms, software and/or hardware related to BCIs (ECA Methods) and one for those working on understanding brain structure, brain function and/or brain signals related to BCIs (ECA Neuroscience). Please take a look at page 6 for more details about the ECA2021 and the call for nominations! If you want to learn more, please contact us via awards@bcisociety.org.

Communications Committee

The Communications Committee informs BCI Society Members about relevant news and events, and develops connections with relevant outside activities and events. In 2021, the Committee maintained the "Resources" tab on the BCI Society Website, which consists of the Job Bank, Affiliated Events, and Calls for Submission. We are happy to hereby present to you the second newsletter, and will continue to work on future issues. Also, we wrote the BCI Society Policy on Photography, Filming and Recording, which will be in effect for vBCI2021. Furthermore, we developed guidelines and suggestions for policies for interacting with other societies. Finally, the contribute to handling the Society's Twitter account and made efforts for a strong presence, but will continue to search for better tools to increase our global exposure.

If you want to learn more, please contact us via communications@bcisociety.org.

Fundraising Committee

The Fundraising Committee was recently established in 2021 and has three members: Nick Ramsey (former president of the BCI society), Donatella Mattia (board member) and Natalie Mrachacz-Kersting (board member; chair of the Fundraising Committee). The role of the Fundraising Committee is to identify possible sponsors and to establish guidelines for the distribution of funding within activities of the BCI Society.

The philosophy we follow in this regard is to offer all existing and future partners (private or public foundations, companies, donators) a clear framework for a successful partnership with the BCI Society.

In the coming year we aim to secure funding for our BCI Awards, the Trainee Collaboration Projects, Future events (e.g. BCI Thursdays) and Social events (e.g. the SFN social). If you would like to sponsor the BCI Society or if you would like to share any thoughts related to sponsoring, please contact the head of the Fundraising Committee, Prof. Natalie Mrachacz-Kersting (email: natalymk@icloud.com).

Membership Committee

This quarter the Membership Committee welcomed new members: Donatella Mattia and Davide Valeriani; and has worked with the new Postdoc and Student Committee (PSC) to establish the Trainee Collaboration Project. These teams support students and postdocs from different laboratories and disciplines to work on BCI-related projects throughout the year. We look forward to updates at the vBCI.

The Membership Committee continues to seek ways to support members, including member discounts for registration to the BCI Society Workshop Series, and access to member-only initiatives and activities. Please contact Gernot Müller-Putz with questions or suggestions.

If you want to learn more or if you want to participate, please email:
members@bcisociety.org.

BCI Society Committee Updates

Student and Postdoc Committee

The Postdoc and Student Committee (PSC) of the BCI Society has been working hard to put together several new initiatives to enhance professional and career development opportunities for trainees. We have launched the Trainee Collaboration Projects, where trainees around the globe form a team to develop a BCI project. In the next few months, the Next Generation series will be expanded to include industry speakers, to provide trainees with opportunities to connect with industry scientists. We will also introduce a new initiative for trainees to present their own research in online talks, to create opportunities for them to receive feedback about their work and connect with colleagues working in the same field. The PSC is also working with other BCI Society members to enhance diversity and inclusion in the BCI field.

The chair is Davide Valeriani, who can be contacted via: studentpostdoc@bcisociety.org.

User Committee

The User Committee of the BCI Society aims to make user-input useful, thereby aiming for the development of usable devices that will be embraced by end-users.

Currently, the Committee consists of Andrea Kübler, Theresa Vaughan, Mariska Vansteensel and Natalie Mrachacz-Kersting.

One of the ideas of the User Forum Committee is to set up an online User Forum. This forum will inform the BCI community about BCI User experiences, create a forum for interactions between and among BCI researchers and BCI Users, support translational efforts by creating an online repository for published articles and offer a space to conduct surveys among (potential) BCI Users.

As a first step, the Committee is currently inventorying the interest of past and current BCI users in such an online Forum by conducting semi-structured interviews, and assesses the interest of BCI researchers in this plan by an online survey. The first results of this effort will be shared during vBCI2021.

Young Talent Committee

As part of our mission to support participation of students and postdocs to attend the events organized by the BCI Society, we are happy to announce that the funds we secured in 2020 from the National Institutes of Health, the National Science Foundation and the Wellcome Trust will be used to support the attendance to vBCI2021 and the BCI Thursdays Workshop Series of nearly 70 students and postdocs, based on awards for outstanding abstracts as well as scholarships to promote diversity.

We were happy to see the great attendance of young researchers during the successful BCI Thursdays events that already took place and look forward to engaging with you all during the upcoming virtual events, including vBCI2021.

In the coming months, the Committee will be working on new grant proposals to support young researchers to attend the in-person 2022 BCI Meeting in Brussels.

If you want to know more, please contact the chair of the Young Talent Committee, Dr. Jennifer Collinger (email: collinger@pitt.edu).

Shape your BCI Society!

Would you like to help shape your Society?

Then become involved in one of our committees! Just send an email to any one the contact addresses in the committee of your choice and find out how you may become involved.

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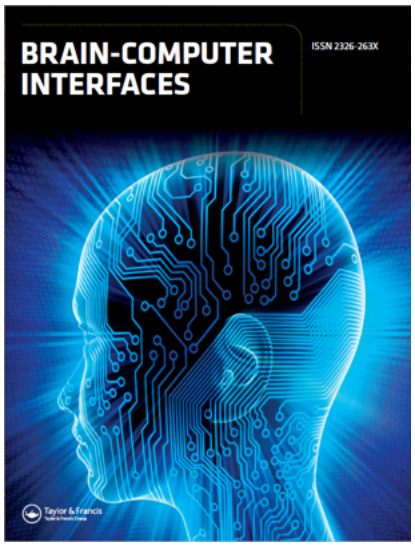
We look forward to hearing from you!

Brain-Computer Interfaces Journal

Brain-Computer Interfaces is recruiting Reviewers and Associate Editors.



Join the Editors-in-Chief of 'Brain-Computer Interfaces' at our Booth at the 2021 virtual BCI meeting exhibit hall. Help test and refine our new classification system matching papers and reviewers. We need your help to make sure that the classification system fits all your research and project ideas so that we can quickly match submitted papers with qualified and interested reviewers. We will have an interactive version of the classification system that you can use to make sure we have included the full breadth of BCI topics. We will be happy to answer any questions about the journal, the review process, special issues, and the editorial board.

The journal 'Brain-Computer Interfaces' is currently recruiting reviewers as well as associate editors for the Editorial Board. Reviewers are expected to have published at least one peer-reviewed paper on BCI. The associate editors manage the review process for specific papers and are expected to have an established record of BCI work. Visit us at the vBCI Meeting to discuss your role in the journal 'Brain-Computer Interfaces' or email Drs. Chang S. Nam (csnam@ncsu.edu) and Jane Huggins (janeh@umich.edu). Associated Editor applicants should include a brief CV and apply no later than September 30th, 2021. Reviewers are considered on a rolling basis. We are especially interested in recruiting associate editors with expertise in invasive BCIs, neuro ethics/privacy, medical applications, etc.

The BCI Journal now has a new process for creating Call for Papers for special issues. One of the guest editors will have to fill in and submit this form: https://think.taylorandfrancis.com/special-issues-cfp-form/. A Call for Papers page will be created, which is linked to the journal homepage and also promoted in our social media channels. Our peer review team will create accounts for the guest editors in the submission site so that they can handle papers. They will also create a submission option with the title of the special issue so that authors can submit their articles to the special issue.

'Brain-Computer Interfaces' is planning to institute an annual Best Paper Award. The award committee will be named for the 1st annual Best Paper Award, to be chosen from papers published in Brain-Computer Interfaces in 2021. The award consists of a plaque or a framed certificate presented to the recipient(s) at an appropriate ceremony (e.g., at the 2022 BCI Meeting).

Indexing of 'Brain-Computer Interfaces' in Science Citation Index Expanded™ has moved one step closer to completion. In addition to being ranked in the Neuroscience category, 'Brain-Computer Interfaces' will now also be ranked in the Biomedical Engineering category. We expect this change to speed the assignment of an official Impact Factor for the journal.

The journal 'Brain-Computer Interfaces' is a peer-reviewed journal published by Taylor and Francis publishers, which is endorsed by the BCI Society. BCI Society members have **free access to the online edition of 'Brain-Computer Interfaces'** as well as a **50% discount on open access article publishing charges**. The journal provides a single location for all kinds of BCI research. While some journals may consider a paper too clinical or too technical, 'Brain-Computer Interfaces' covers all topics related to BCI. You are cordially invited to propose special issue topics and submit high-quality original research articles on a wide range of topics. In this newsletter, we are also announcing the upcoming Special Issue of Papers from the 2021 vBCI Meeting.

vBCI Special Issue

Attendees of the 2021 Virtual International BCI Meeting scheduled for 7-9 June 2021 are invited to submit papers for a special issue of the journal *Brain-Computer Interfaces.* For more information please visit: http://bit.ly/2021_BCI_Papers

Topics and Events of Interest for BCI Society Members

Did you know that the BCI Society website lists events that are of interest for BCI Society Members? If you know of an important event that is going to take place, you can contact the BCI Society and request the event to be mentioned on the website. Your request will then be processed by the Communications Committee and, if relevant, the board. We distinguish three types of events: Other events, Affiliated events and Partnered events. Please take a look at https://bcisociety.org/affiliated-events/ for more details.

If you are looking for a new position in the BCI field, take a look at the Job Bank on the BCI Society website. We invite all BCI Society members to post their open positions there. So, do not hesitate to contact us if you want to make a posting or if you have questions. All requests can be sent to: communications@bcisociety.org.

Election Results

and, last but not least, here are the Election Results!

As you may know, BCI Society board members are appointed for three years and a maximum of two terms. This year, the terms of Nick Ramsey, Gernot Müller-Putz, Masayuki Hirata and Mariska Vansteensel ended, with the last three board members being eligible for a second term.

In the 2021 call for nominations, the board received several nominations from both the implanted and the non-invasive BCI fields. A special Board Nomination Committee evaluated all nominations and made a selection, based on contributions to BCI research & development and diversity, which was confirmed by the Board. The elections, in which all BCI Society members were invite to vote, were held in April/May.

The board is happy to inform you that Gernot Müller-Putz, Marc Slutzky, Mariska Vansteensel and Reinhold Scherer were elected to join the board of the BCI Society for the coming three years. Together with the other board members, they are committed to support you, the membership, in your important work!

Meet the newly elected board members:

Gernot

Marc

Mariska

Reinhold

We would also like to take this opportunity to express our heartfelt gratitude to departing board member Masayuki Hirata for the great collaboration in the past years, and to former BCI Society President Nick Ramsey for his leadership and dedication to make the BCI Society the flourishing community it is now. Thank you both!

Nick Ramsey

Masayuki Hirata