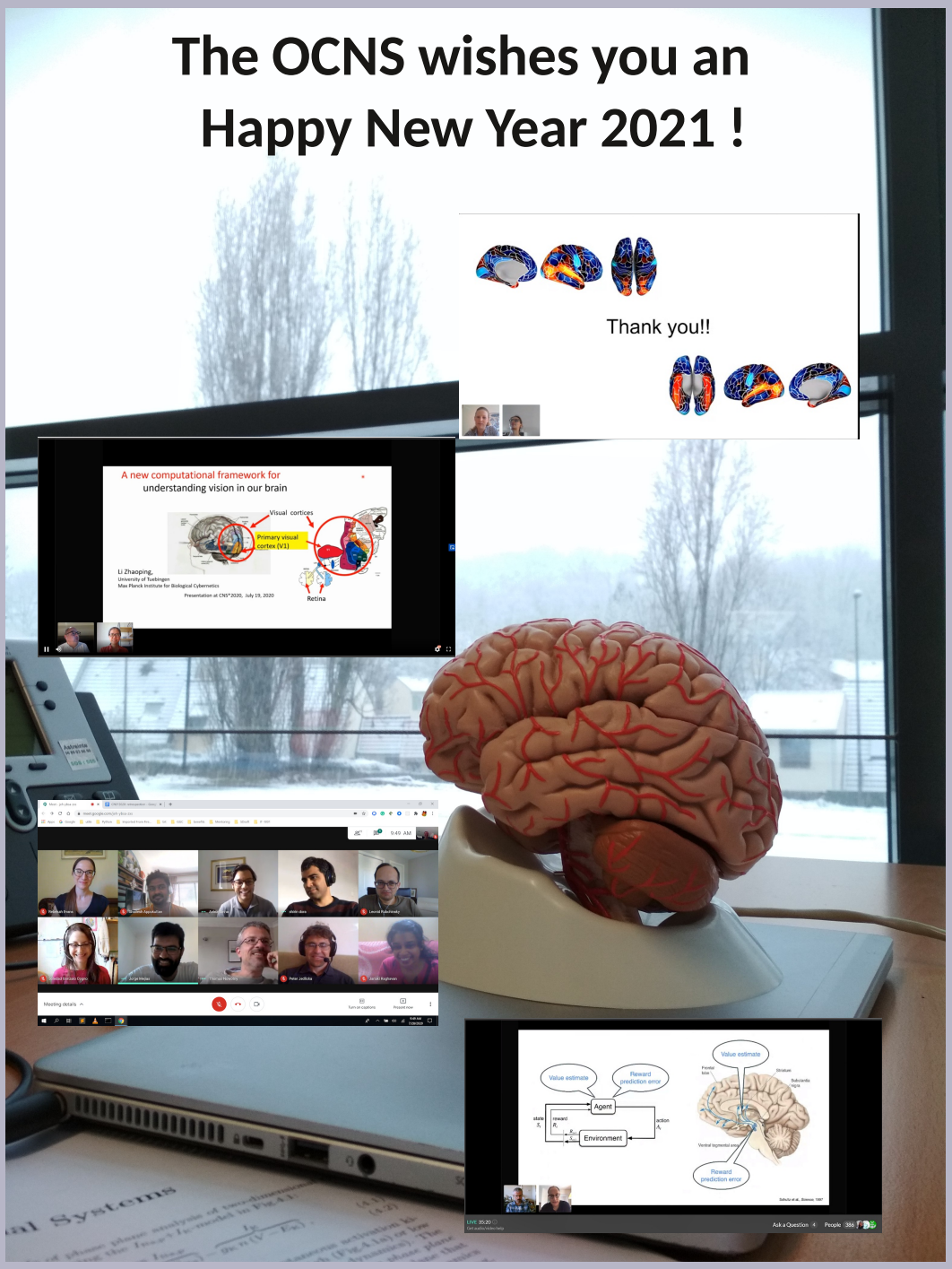
Organization For Computational Neurosciences

Member Newsletter | February 2021 | Volume 5 No.1



@CNSorg CNSorg cns_ocns

https://www.linkedin.com/company/organization-for-computational-neurosciences/

Contact us if you have comments or information to include in the newsletter newsletter@cnsorg.org

Copyright 2021 © Organization for Computational Neurosciences

OCNS, Inc is a US non-profit, 501(c)(3) serving organization supporting the Computational Neuroscience community internationally.

We seek sponsorship from corporate and philanthropic organizations for support of student travel and registration to the annual meeting, student awards, and hosting of topical workshops. For more information about how you can contribute, please email **sponsorship@cnsorg.org**

OCNS Newsletter
Editor: Laure Buhry
Contributors:
Helena Ledmyr
Ankur Sinha
Sharmila Venugopal
Fleur Zeldenrust

Editorial

2020 has forced us to rethink our work organization in a way that is compatible with generalized lockdown. It has both given us time to think and overloaded our schedules.

The first weeks of lock-down allowed some of us to work on ever-postponed-not-very-important-not-really-urgent-tasks without being incessantly disturbed. Nobody to knock at the door for "urgent" matters. It has called us to mind that research needs time, time to think.
Then, our schedules and email boxes were full, full of remote meetings and phone calls, full of emails. We indeed have had to replace face-to-face interactions and easy collection of information about our professional and scientific environment by new strategies that could cope with the lack of implicit communication.
Most of us have had to give remote classes to hundreds of students, making sure that they caught a little bit of information despite their distress and bad internet connections. Sleepy and bored students were replaced by silences in remote classerooms, easy chats in the corridors by thousands of emails.

Graduate students have worked alone during months with little access to their laboratories, and most of them still are. The same goes for faculties who work on theoretical aspects and are thought to be able to do everything remotely because "they only need a computer, paper and pencils".

The need for more interactions is reflected by new initiatives taken by the OCNS like SIGs (Special Interest Groups) that were already discussed before the pandemics. SIGs are meant to foster collaborations in Computational Neurosciences on miscellaneous aspects that matter to you. The suggestion of creating SIGs became even more meaningful in the pandemic context (pages 5 and 6). The current context also points up the need for mentoring (see in "General Announcements" page).

What does all of that tells us? It highlights brain plasciticity and adaptability!

The OCNS is keen to express its support to all students, laboratory and university members, junior and senior scientists, who suffer from the pandemics and its consequences, and whishes you an Happy New Year.

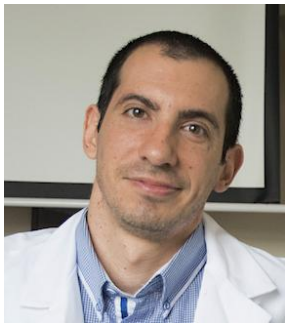
Laure Buhry, OCNS

New Year, New OCNS Directors

The current board of directors consists of around 20 elected and ex officio members. According to the Bylaws, elections are held to replace three or four outgoing directors each year. This year, we welcome four new directors. Here they are with their duties :

Eirini Mavritsaki
Social media assistant
Birmingham City University
Birmingham, UK

Friedemann Zenke
Travel awards assistant
Friedrich Miescher Institute
For Biomedical Research
Basel, Switzerland



Salvador Dura-Bernal
Registration assistant
SUNY Downstate
Brooklyn, USA

Shailesh Appukuttan
Webmaster assistant
Centre National De La
Recherche Scientifique
Gif-Sur-Yvette, France

Welcome !

Organization For
Computational Neurosciences

Building Global Communities: A Joint Mission of OCNS and INCF (1/2)

Sharmila Venugopal (OCNS) and Helena Ledmyr (INCF)

Sharmila Venugopal, OCNS Education and Training Chair (Outgoing)
University Of California Los Angeles, Long Beach, United States.
OCNS Representative at Council for Training, Science, and Infrastructure,
INCF Member, Standards and Best Practices Committee.

Helena Ledmyr, Director, Development and Communications.
International Neuroinformatics Coordinating Facility Secretariat.

Recently, OCNS joined hands with The International Neuroscience Coordinating Facility (INCF) to create broader impact beyond computational neuroscience! Since its inception in 2009, INCF has been a driving force for developing open and FAIR standards and best practices, tools, and resources in the neuroscience community. INCF and OCNS have had overlapping communities in the areas of computational neuroscience, modeling, simulation, and tool development. In fact, several of the INCF founding members were computational neuroscientists!

The first INCF scientific program -- the Program on Multiscale Modelling -- was established to discover and meet the neuroinformatic needs of the computational neuroscience community. A founding workshop was held in 2007 to survey community demands, ongoing activities, and plans for tool development for neural modeling across many different scales. A task force was recruited to work on these issues, consisting mainly of authors and primary contributors to a wide variety of computational neuroscience efforts, including the Blue Brain Project, GENESIS-3, KInNeSS, MOOSE, NEURON, NEST, PyNN and NeuroML. They chose to focus on developing practical standards for future modeling and software construction and creating tools to connect existing key simulators to enable interoperability for existing models. The work resulted in the simulator-independent language Network Interchange for NEuroscience (NineML) for unambiguous description of neuronal network models, efficient model sharing and reusability, and an ontology for describing computational neuroscience models (CNO). The task force discussions also had trickle-down effects into communities involved in simulator development and simulator-independent language efforts, such as NeuroML and PyNNeuroML and PYNN have since been formally endorsed by INCF through a process that was implemented in 2018.

INCF resources include TrainingSpace, an online education platform designed primarily to assemble training material in the growing field of Computational Neuroscience and beyond. It provides lectures, courses, and tutorials on topics in computational neuroscience, computer science, neuroinformatics, and more. TrainingSpace is supported by KnowledgeSpace, an online encyclopedia for neuroscience, and Neurostars, a forum for discussing ideas and troubleshooting challenges for neuroscience researchers, software developers and infrastructure providers.

Building Global Communities: A Joint Mission of OCNS and INCF (2/2)

Sharmila Venugopal (OCNS) and Helena Ledmyr (INCF)

OCNS joined INCF as a member institution in early 2020. Since then, OCNS has become a part of this global community to define the future landscape of FAIR Neuroscience in this data-driven decade! This collaboration has already seeded new projects. Following discussions at CNS 2020, it was suggested by Ankur Sinha (Board Member, OCNS) that OCNS form a special interest group (SIG) on infrastructure/software/tools in computational neuroscience, with the motivation:

"Computational neuroscience cannot exist without the tools that we all rely on. So, this SIG will focus on these. We'll find and discuss tools, we will learn how to use them, we will test and review them, we will file bugs to inform the developers of issues, and finally we will try to learn how they work and try to get involved in their development—to ensure that these tools that we rely on remain in good shape by having communities looking after them."

The exact scope of this SIG is still under discussion on NeuroStars, but the following activities have been suggested:

- Improving awareness of current tools
- Improving the maintenance of current tools
- Reviewing tools
- Improving technical knowledge

It has been agreed that this SIG will be joint between OCNS and INCF.

An additional joint project includes building a global community to initiate standards and best practices for the use, development, and dissemination of informatic approaches and models of NeuroGlial Systems – A Consortium for Neuro-Glial Informatics (CNGI). These efforts bolster the shared mission of OCNS and INCF to foster quantitative approaches in Neuroscience.

Moving forward, OCNS hopes to nourish this collaboration with INCF to build a global NeuroWorld!

Current SIGs on https://neurostars.org/t/cns-2020-ocns-members-meeting/15273/12 :
Infrastructure/Tools/Software SIG
Outreach SIG
Clinical computational SIG
Student and ECR career development
Industry SIG
Diversity SIG

To renew your membership, login at cnsorg.org to pay your OCNS dues. Please consider renewing with a multiple year membership.

Member Type	One year	Two years	Three years
Student	10 USD	15 USD	20 USD
Postdoc/not-for-profit employee	20 USD	30 USD	40 USD
Faculty/for-profit employee	50 USD	75 USD	100 USD

Student: Anybody studying toward an undergraduate or graduate degree.
Postdoc/not-for-profit employee: Anybody who is employed as a postdoctoral scholar or postdoctoral fellow, and anybody who is employed in a university lab or non-industry research institute as a technician or research assistant not seeking a degree.
Faculty/for-profit employee: Anybody who is employed as faculty, laboratory head, independent researcher, or in an equivalent position, and anybody who is employed in industry or for-profit institutions.
Retired persons should apply for or remain in their pre-retirement category.

Special Interest Groups (SIGs): Focus Update on the Software SIG

Ankur Sinha, student member, UH Biocomputation University of Hertfordshire, UK; OCNS Website/Infrastructure Manager

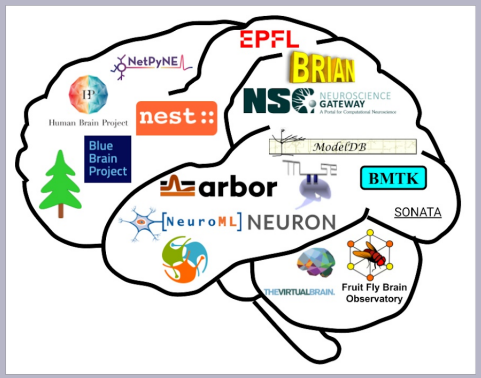
Since its inception at the end of CNS*2020, the Software Special Interest Group (SIG) has continued to grow steadily. With ~20 active members, many of who are involved in the development of software commonly used in computational neuroscience, the group is now shared between the INCF and OCNS as the Software Working Group (WG).

The WG currently has two projects on its agenda. The first is the documentation of current software development best practices that can be referenced by the research community when building tools for wider use and also when writing code for their own research tasks. The project lives on GitHub and community contributions are most welcome: https://github.com/OCNS/SoftwareDevelopmentGuidelines

The second project aims to distribute knowledge of how research tools are developed to the research community. The working group will host regular on-line sessions in which researchers from different software teams will discuss the usage and development of their tools. The hope is to improve communication between development teams to help them all improve by learning from each other. Additionally, we also hope that these sessions will increase knowledge of software development in the community and encourage more people to participate in the maintenance of these tools that are so critical to their research. Having self-sustaining communities around research tools is a critical step in ensuring their health in the long term.

We encourage people at all levels of expertise to participate in the working group. All members of the working group may propose new tasks and projects for the group to work on. Please contact the current chairs at webmaster@cnsorg.org for any queries, or proceed directly to our meet and greet on INCF's Neurostars.org discussion platform in the OCNS category. We hope to have our first meeting soon -- the invitation will be sent out on the usual channels.

Ankur Sinha, on behalf of the INCF/OCNS Software working group.



General announcements

- **New Programme Chair members :**
  - Jugoslava Acimovic, Senior Researcher, Computational Neuroscie;nce Group Faculty of Medicine and Health, Technology Tampere University, Tampere, Finland;
  - Paula Sanz-Leon, Brain Modelling Group, QIMR Berghofer;
  - Masanori Shimoni, Associate Professor, Kyoto University, Graduate School of Medicine and Faculty of Medicine, Japan;
  - Alberto Mazzoni, Assistant Professor in Bioengineering, The BioRobotics Institute, Scuola Superiore Sant'Anna, Italy
  - Skirmantas Janusonis, Department of Psychological and Brain Sciences, Interdepartmental Program in Dynamical Neuroscience University of California, Santa Barbara, USA

- **Call for support in promoting the Simply Neuroscience educational program:**

On behalf of the founder and CEO of Simply Neuroscience, an international non-profit organization dedicated to expanding students' interests in interdisciplinary neuroscience and psychology education, outreach, and awareness, the OCNS is encouraging its senior members to volunteer as advisors for the Action Potential Advising Program (APAP).
This program works to virtually connect young neuroscience students ("advisees") with older professionals ("advisors") to provide educational guidance and mentorship. The APAP's mission is to bridge gaps in early neuroscience and psychology education through creating an international, centralized mentorship space that supports both STEM and humanities students.
More about the program on the website: https://www.simplyneuroscience.org/advising-program
Advisor application: https://forms.gle/nBD8m6ynN8VTBo23A

- **Reminder : OCNS Melbourne postponed to 2022.**

- **OCNS*2021**: flexible hybrid or online format? Stay tuned!

On behalf of the OCNS, the Newsletter contributors wish you much success with your research and training, and we look forward to seeing you online or in Leipzig at CNS*2021 !