

SOUND MINDS

Mission of the UCI Center for Hearing Research (CHR):

Providing an intellectually stimulating and interactive home to advance collaborative and multidisciplinary research, training, and service in hearing loss and other communication disorders.



Dear Colleagues and Friends,

It's been a while since we published the last CHR newsletter. I am happy to report that CHR continues to be active and productive in hearing-related research, teaching and service. As a result of our collective effort and achievements, CHR has been renewed as a campus center for another 5 years until 2018. Here I share with you some of the CHR activities and highlights.

- CHR continues to grow and currently has 38 members and over 100 associate researchers from 5 Schools and 10 Departments at UCI. A significant development was that CHR expanded beyond UCI to welcome 4 new members from UCR (Khaleel Razak) and Loma Linda University (Wei Dong, Marjorie Leek and Brenda Lonsbury-Martin).
- CHR members conduct 47 projects, totaling \$44M and including an NIH P30 Core Grant, which has been successfully renewed for another 5 years until 2017 and a T32 Training Grant, which has supported 8 graduate students and 4 post-docs in the last 4 years and received an outstanding score for its recent renewal application.
- In addition to our annual symposia, which had been sponsored jointly with the Providence Hearing and Speech Center in the last two years, CHR has sponsored the Annual SoCal Hearing Research Meeting and introduced a biweekly seminar series, featuring both internal speakers and 6-8 outside researchers annually.
- CHR gives annual awards to recognize the best graduate student and the best postdoctoral researchers.
- Working with the Cognitive Sciences Department, CHR has proposed a Minor in Hearing and Speech Sciences, which will provide programmatic training for undergraduates interested in becoming scientists or clinicians in allied-health fields.
- CHR continues to work closely with the local, national and international communities to promote hearing-related research and service, presenting at the Irvine and Orange School Districts and Patient Advocacy Groups as well as providing hearing screening and hosting 3 visits by the Lions Club International Presidents.

None of the above could have been achieved without the effort and support of the CHR members and friends. I hope you enjoy reading this newsletter and continue your support for CHR in the future.

With my warmest regards and best wishes for a magnificent holiday season,

Fan-Gang Zeng, PhD
CHR Director



CHR Annual Symposia

The annual symposium is our flagship event, attracting over 100 participants, including UCI faculty, post-docs and students as well as community researchers, physicians and special education teachers. We provided for the first time continuing medical education credits for both physicians and audiologists.



The 8th Annual Symposium was co-sponsored with Providence Speech and Hearing Center. From left, Katy Sullivan, Ramesh Srinivasan, Sarah Rotschafer, Raju Metherate, Fan-Gang Zeng, Samira Anderson, Sridhar Kalluri, Harry Levitt, Linda Smith, John Niparko, Ginger Stickney, and Virginia Richards.



The 9th Annual Symposium celebrated the contributions of Leonard Kitzes to Hearing Research, featuring presentations from his trainees and colleagues. From left, Mike Merzenich, Len Kitzes, Arne Starr and Ed Rubel. Kyle Nakamoto, Karina Cramer and David Moore (not shown) also presented.

CHR Seminar Series

The year 2014 marks the commencement of CHR's Seminar Series, in which both UCI and outside researchers are invited to present their ongoing research. The series is coordinated by John Middlebrooks and a team of CHR trainees, who work together to carefully select and recruit each speaker based on merit and interest to CHR. A graduate student luncheon is provided on the day of the seminar to encourage students to discuss their projects and gain personal insight on a career in research.

Extramural speakers have included:

- Allen Ryan (UCSD)
- Carolina Abdala (USC)
- Josh McDermott (MIT)
- Dan Sanes (NYU)
- Jeffery Wenstrup (Northeast Ohio Med Univ)
- George Spirou (West Virginia Univ)
- Stephen David (Oregon Health and Science Univ)
- Frederick Gallun (Oregon Health and Science Univ)

The 2015 seminar speakers will include:

- Edward Chang (UCSF)
- Donna Fekete (Purdue)
- Christophe Micheyl (Starkey)
- Sarah Bottjer (USC)
- Deda Gillespie (McMaster Univ)
- Barbara Shinn-Cunningham (Boston Univ)

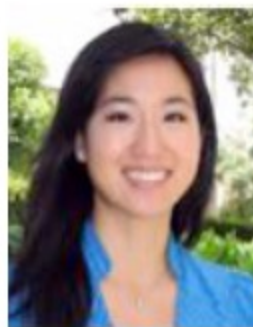
The series also highlighted the work of our own hearing researchers, including Peter Bremen, Yi Shen, Raju Metherate, and Yaser Ghavami, Mike Yassa, Sunil Gandhi, and Ron Frostig. A full schedule of speakers and talk titles can be found at hearing.uci.edu

CHR Training Program (Program Director: Raju Metherate, PhD)

Graduate students are supported for up to two years, typically in the 2nd and 3rd year of a doctoral program. Support is also available for postdoctoral researchers, including medical residents in Otolaryngology for up to two years. Since many postdocs are new to hearing research or have been trained narrowly within their field, they audit the course Auditory Neuroscience (N260) and participate in activities for all trainees designed to broaden exposure to hearing research and enhance their professional development.



During its first four years the program supported 12 individuals, including 8 predoctoral and 4 postdoctoral fellows (two of them highlighted below). The predoctoral trainees include two in the UCI Medical Scientist Training Program (MD/PhD). Three postdocs hold a PhD degree, and one has an MD. The work of several trainees involves collaborations with multiple CHR faculty members, in keeping with the goal to encourage interdisciplinary research and training.



Janice Chang completed her PhD and MD degrees with an emphasis on tinnitus. She recently matched to an Otolaryngology residency at UCLA. She received the Achievement Rewards for College Scientists (ARCS) Foundation Fellowship, Yonath Scholar, Beckman Scholar, and a UC Public Impact Distinguished Fellowship.



Kasia Bieszczad, PhD, found an epigenetic mechanism that regulates experience-dependent plasticity in auditory cortex. Kasia received the Next Generation Award from the Society for Neuroscience, the Rising Star Award from the Association for Psychological Science, and was a Visiting Fellow at the Institute for Advanced Study in Berlin. Kasia is now an assistant professor at Rutgers University.

Justin Yao won the 2014 Best Graduate Student Award Hossein Mahboubi won the 2014 Best Post-Doc Award

Justin Yao (pictured left with Drs. Richards and Zeng) is a PhD candidate working in Dr. John Middlebrooks' lab. His thesis examines the mechanisms of spatial hearing that facilitate segregation of multiple competing sounds. He has presented his work at ARO and published a paper in the *Journal of Neurophysiology*. Justin intends to pursue a career in academia.

Hossein Mahboubi (pictured right) is an MD/MPH graduate from Tehran University of Medical Sciences who works with Drs. Hamid Djalilian and Mark Bachman on cochlear implants, micro-drive hearing aids, chronic ear diseases, and noisy toys. He has published extensively in *Laryngoscope*, *Otology and Neurotology*, *JAMA Otolaryngology - Head and Neck Surgery*, and *Biomedical Microdevices*.



Meet New Member: Harrison Lin, MD



Dr. Harrison Lin is a board-certified otolaryngologist who joined UCI in August 2014 after a 2-year neurotology fellowship with Jeff Harris at UCSD. Harrison received his BS from Harvard and MD from USC. During his residency at Harvard Medical School, he did a one-year research fellowship with Charlie Liberman at the Eaton-Peabody Lab.

Dr. Lin will devote half of his time to clinics and half to research, including translational studies of neural prosthesis and perceptual studies of neural degeneration. He has already submitted with John Middlebrooks a grant application to develop a chronically implantable auditory nerve electrode.

Congratulations



Dr. Khaleel Razak, UC Riverside, received tenure and an NSF Career Award to study "Cortical Mechanisms of Sound Localization"



CHR Featured in OC Register, Sept. 30, 2013



Thomas Yuen, CHR Advisory Board Member, received UC Irvine's Extraordinarius award for his superlative business accomplishments, philanthropy and volunteer work

CHR Advisory Board:

- Bishnu Atal, Retired Technical Director of AT&T Bell Labs and Research Professor, University of Washington, Seattle, WA
- Brent Edwards, CTO, EarLens Corp., Menlo Park, CA
- Richard Miyamoto, Professor and Chairman of Otolaryngology-Head and Neck Surgery, Indiana University, Indianapolis, IN
- Peter Narins, Distinguished Professor, UCLA, Los Angeles, CA
- Neil Segil, Research Professor, University of Southern California, Los Angeles, CA
- Linda Smith, CEO, Providence Speech and Hearing Center, Orange, CA
- Thomas C.K. Yuen, CEO of PrimeGen Biotech, Irvine, CA

CHR Executive Committee:

- Karina Cramer
- Raju Metherate
- John Middlebrooks
- Virginia Richards
- Fan-Gang Zeng

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