

# SEMINAR

## Neural bases of childhood stuttering persistence and recovery

*Voor Logopedisten die up-to-date willen zijn*

**docent: dr. Soo-Eun Chang**

**University of Michigan, USA**



Datum: **maandag 3 juli 2017**  
Aard: seminar  
Studiebelasting: 6 uur (6 contacturen)  
Docent: dr. Soo-Eun Chang  
Plaats: Erasmus MC Rotterdam (info locatie volgt)  
Tijd: 9:30 tot 16:00 uur  
Kosten: €85,-  
€50,- (studenten)  
Inclusief koffie, thee en vegetarische lunch  
Certificaat: ja  
Accreditatie: wordt aangevraagd  
Aantal deelnemers: minimaal 40 en maximaal 120  
Inlichtingen: [foi.secretariaat@erasmusmc.nl](mailto:foi.secretariaat@erasmusmc.nl)  
Website: [https://www.erasmusmc.nl/kno/seminar\\_chang](https://www.erasmusmc.nl/kno/seminar_chang)



## **Introductie**

Soo-Eun Chang, Ph.D., CCC-SLP, is the Principal Investigator and Director of the Speech Neurophysiology Lab. Soo-Eun is an Assistant Professor in the Department of Psychiatry and the Rosa Casco Solano-Lopez Research Professor of Child and Adolescent Psychiatry at the University of Michigan. Soo-Eun is also an Adjunct Professor at the Michigan State University, in the Department of Communicative Sciences and Disorders, and the Department of Psychology.

One of the goals of her research program is to identify objective neural markers that may help diagnose and predict persistent forms of stuttering in the future. Soo-Eun is also interested in developing novel treatment options for stuttering, which may include neuromodulatory techniques that augment behavioural therapy, and early intervention to prevent chronic life-time stuttering. Soo-Eun received her MS and clinical training as a Speech-Language Pathologist at Vanderbilt University, received her PhD in Speech and Hearing Science at the University of Illinois at Urbana-Champaign, and trained as a postdoctoral research fellow at the National Institute of Neurological Disorders and Stroke (NINDS) Intramural Research Program at the National Institutes of Health (NIH).

## **Samenvatting seminar**

Stuttering affects the fundamental human ability of fluent speech production, and can have a significant negative impact on one's psychosocial development. Considering its high prevalence (1% of the general population and 5% of all preschool age children), the pathophysiology of stuttering is still unclear. In this presentation, Dr. Chang will present new data from her longitudinal dataset of childhood stuttering, which represents the largest, concurrently collected, longitudinal brain and behavioral datasets from young children who stutter starting from close to symptom onset. This dataset allows her team to comprehensively study dynamic changes in neural development associated with childhood stuttering, particularly those associated with persistence versus recovery from stuttering. Recent results from structural and functional neuroimaging data will be presented, with discussions on the potential of identifying objective early markers for persistent stuttering. These findings may, in the future serve as neural targets for developmentally appropriate intervention strategies for children who stutter.

## **Publicatie**

Chang, SE. (2014). Research Updates in Neuroimaging Studies of Children Who Stutter. *Seminars in Speech and Language*, 35(02), 067-079.

### **A b s t r a c t**

In the past two decades, neuroimaging investigations of stuttering have led to important discoveries of structural and functional brain differences in people who stutter, providing significant clues to the neurological basis of stuttering. One major limitation, however, has been that most studies so far have only examined adults who stutter, whose brain and behavior likely would have adopted compensatory reactions to their stuttering; these confounding factors have made interpretations of the findings difficult. Developmental stuttering is a neurodevelopmental condition, and like many other neurodevelopmental disorders, stuttering is associated with an early childhood onset of symptoms and greater incidence in males relative to females. More recent studies have begun to examine children who stutter using various neuroimaging techniques that allow examination of functional neuroanatomy and interaction of major brain areas that differentiate children who stutter compared with age-matched controls. In this article, I review these more recent neuroimaging investigations of children who stutter, in the context of what we know about typical brain development, neuroplasticity, and sex differences relevant to speech and language development. Although the picture is still far from complete, these studies have potential to provide information that can be used as early objective markers, or prognostic indicators, for persistent stuttering in the future. Furthermore, these studies are the first steps in finding potential neural targets for novel therapies that may involve modulating neuroplastic growth conducive to developing and maintaining fluent speech, which can be applied to treatment of young children who stutter.

## **Doelgroep**

Dr. Soo-Eun Chang kan haar hersenonderzoek bij kinderen die stotteren enorm helder uitleggen, ook aan mensen met alleen basale voorkennis op het gebied van de neurologie. Dit seminar is opengesteld voor logopedist-stottertherapeuten, logopedisten en studenten logopedie. De groepsgrootte is minimaal 40 en maximaal 120 deelnemers. Ons streven is om zoveel mogelijk collega's (gespecialiseerd en allround) en studenten in staat te stellen kennis te nemen van Changs onderzoek en de recente resultaten die meer inzicht kunnen geven in de diagnose en prognose van beginnend stotteren.

## **Sluitingsdatum**

24 juni 2017

## **Aanmelding voor het seminar**

Ga naar [https://www.erasmusmc.nl/kno/aanmelding\\_chang](https://www.erasmusmc.nl/kno/aanmelding_chang)

Meld je vóór **24 juni 2017** *definitief* aan door het aanmeldingsformulier volledig in te vullen.

Hiermee meld je je definitief aan, geef je je toestemming voor de auto-matische afboeking van de deelnamekosten en kunnen wij de automatische incasso en het certificaat verzorgen. Voor gebruikmaking van het studententarieff dient een kopie van je studentenkaart te worden gemailld naar [foni.secretariaat@erasmusmc.nl](mailto:foni.secretariaat@erasmusmc.nl)

De aanmeldingen worden op basis van “wie het eerst komt het eerst maalt” behandeld.

De deelnamekosten ad €85,- (€50,- voor studenten) worden automatisch van je opgegeven bankrekening afgeschreven. Deze bedragen zijn inclusief koffie, thee en vegetarische lunch. NB Neem zelf een flesje water mee.

Uiterlijk 1 week voor aanvang van het seminar ontvangen de mensen die een volledig ingevuld aanmeldingsformulier hebben gemailld en die geplaatst zijn voor het seminar nadere informatie. Er is een annuleringsregeling van toepassing.

Met vriendelijke groet,

Marie-Christine Franken en Jan Bouwen