We will present a research that was carried out on children followed at the Unit “Early childhood and Parenting Vivaldi” (clinical participants: Dr D. Rabain, Dr E. Aidane, L. Camon-Sénéchal, L. Khin-Franc, M. David, M. Garrigue-Agbrall). Relationships between the family linguistic context, the early interactions and the development of the young children was studied. From a statistical point a view, the impact of two factors was studied: choice of languages spoken with the child and type of bilingualism. Early communication was the subject of a qualitative study. Valorizations of family operation and languages support were set up in a study context. Our research also evaluated the interest of therapeutic programs taking into account family languages surrounding the young child during his language acquisition.

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Attachment and psychopathology from infancy to adolescence

Mo-S-096
Attachment in infancy
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Attachment process in Infancy in 2012: what neurosciences learn about? Forty years after the publication of the first volume of “Attachment and Loss” by Bowlby, neurosciences highlight biological foundations of attachment process in infancy, what can be called the brain basis of attachment and caregiving process. We will summarize 5 major issues which can inform clinical practices with newborns and their parents. The evolutionary perspective is highlighting the “strange/familiar” paradigm, and the evolutionary configuration of caregiving/attachment processes. The “imprinting like process” is considering with new knowledge about foetal and neonatal sensoriality. The role of key hormones and neurotransmitters in the regulation of social bonding and particularly in the reciprocal processes of proximity seeking and proximity giving. The social regulation of emotion and stress. The genetic and epigenetic perspective in maternal care.

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Mo-S-097
Adolescence in the light of attachment
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We will present the psychological, interpersonal axis of development in adolescence through the lens of the attachment theory. The key task of adolescence is to develop autonomy. At first glance, adolescents appear to be engaged in an active flight away from parents, together with an increased exploratory behavior. In fact, autonomy-seeking behavior is most easily established in the background of secure attachment to parents, and most youngsters turn to parents under conditions of extreme stress. The only difference between infants and adolescents, in that respect, is the threshold level of stress necessary to activate their attachment systems and the intensity of the need to explore. We will review the links between different psychopathologies in adolescence and security of attachment.

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Social signal computing and ASD

Mo-S-098
Learning the acoustics of autism-spectrum emotional expressions – a children’s game?
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Children with Autism Spectrum Conditions (ASC) may experience significant difficulties to recognize and express emotions. The ASC-Inclusion project is creating an internet-based digital gaming experience that will assist children with ASC to improve their socio-emotional communication skills, combining voice, face, and body gesture analysis, and giving corrective feedback regarding the appropriateness of the child’s expressions. The contribution focuses on the analysis of vocal expression and describes a first attempt towards identifying pertinent acoustic speech features. For this purpose, a database of prompted phrases (e.g., “Today’s my birthday”) was collected in Hebrew; inducing nine emotions embedded in short stories: afraid, angry, ashamed, calm, happy, proud, sad, surprised, and “neutral”. It comprises 529 utterances (16 m 24 s) and contains speech of children (6–12 years) with ASC (1f, 8 m) and typically developing children (5f, 6 m) under the same conditions. The outcome of the analysis is a consistent list of speech parameters for audio-visual feedback.

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Mo-S-099
Dynamic modeling of prosody: Application to atypical prosody recognition in ASD, PDD-NOS and specific language impairment
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Atypical prosody contributes to language, communication and social interaction disorders, which adds a barrier to social integration in individuals with communication disorders. Advances in automatic speech processing have permitted to study the feasibility of automated systems for characterizing prosodic skills of language-impaired children. However, the systems are faced with multiple challenges, since speech prosody concerns many perceptual components that present high variability due to contextual and speaker’s idiosyncratic variables. Despite progress in extracting a wide set of prosodic features, there is no clear consensus today about the most efficient features. In this talk, I present a novel metric of speech rhythm that aims to characterize the dynamic of prosody. The ability of acoustic and rhythmic features to recognize atypical prosody from ASD, PDD-NOS, specific language impairment and typically developing children is evaluated on 6 hours of speech recorded from three independent tasks: text reading, sentence imitation and emotional story telling.

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Mo-S-100
Interpersonal synchrony: A survey of evaluation methods across disciplines and its application to ASD
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Synchrony refers to the temporal coordination between individuals during social interaction. The analysis of this phenomenon is complex, requiring the perception and integration of multimodal communicative signals. For its influence in early development, language learning and social connection, the evaluation of synchrony has received multidisciplinary contributions. Originally studied by developmental psychologists, it is now interesting researchers, from social signal processing, robotics and machine learning fields. We will emphasize on...