We will present a research that was carried out followed at the Unit “Early childhood and Parenting Vivaldi” (clinical participants: Dr. D. Rabain, Dr. E. Aidane, L. Camon-Sénéchal, L. Khin-Franck, M. David, M. Garrigue-Abrall). 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 operations and family 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 co 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 adolescence, 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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In this talk, we will present a new conceptual framework for the development of an internet-based digital gaming experience that will assist children with ASD 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, 8m) and typically developing children (5f, 6m) 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
the current questions asked by synchrony evaluation and the state of the art related methods. Definitions and functions of synchrony in early years and adulthood will be first presented. Then, we will review the non-computational and computational approaches to annotate, evaluate and model interactional synchrony. To stress our point, recent applications of computational approaches to ASD studies will be discussed.

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Mo-S-101

Michelangelo, an European research project exploring new, ICT-supported approaches in the assessment and treatment of autistic children

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Michelangelo – a currently running research project partially funded by the European Commission (FP7) - intends to bring the assessment and the therapy of the autism out of the clinical environment and develop a patient-centric home-based intervention requiring a minimal human involvement and therefore extremely cost effective. The project exploits ICT and other technologies in assessing and treating ASD in children in a more “natural” home environment where non-obtrusive techniques are used. At the same time the proposed methodology aims at enhancing the effectiveness of the treatment through its “intensiveness” and “personalization” matching the individual characteristics of the autistic children. As outcomes of the research work, advances will be achieved also in various technological fields. Michelangelo project is expected to have impacts from the medical, social and economic perspectives. The results of its research work will be validated through an exploratory study with autistic children in France and in Italy.

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Mo-S-102

Adults born very or extremely premature

Mo-S-103

Cortisol responses to induced stress (TSST) in a young adult prematurely born sample

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Epidemiologic studies have reported increased levels of neurologic and cognitive disabilities in adolescents and young adults born premature. The purpose of the present study was to examine the relation between cortisol reactivity and comorbid internalizing and externalizing behavior problems among children born premature. Method: In 70 young adults born very premature (< 29 wga) and 35 comparison young adults born in the same hospital and matched for age and SSE level, we collected salivary cortisol samples at 5 moments in the course of 3 days. The 2nd day, subjects were asked to perform the Trier Social Stress Test, which includes a public speaking task and a mental arithmetic task. The diurnal cortisol slope (Area under the Curve (AUC) was calculated and parents and young adult completed the CBCL. Results have shown a reduced physiological response to stressors in the premature group, which were linked to internalize behaviors.

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Mo-S-104

Attachment system, reflective function, and response to stress in premature born adults

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The attachment can be related with individual differences of response to stress neurophysiologic and cognitive levels (Maundner et al., 2001). Objective: Study the relationship between neonatal biological risk, psychosocial risk at 30 month and later minor sequel at 7 years old with the response to stress, attachment and reflexive function and health of former VLBW at young adulthood.

Sample.– Fifty VLBW, 19–21 years old randomized, born in Hospital Sant Joan de Deu. 25 VLBW present later minor sequel at 7 years and 25 don’t present.

Control group.– Seventy-five normal birth, 19–23 years old.


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Meetings of minds in psychotherapy

Mo-S-105

The baby and her parents: The clinician’s role in helping parents to see and experience the inner world of the infant

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