Eye movement characteristics of slow and fluent readers in relation to the initial landing position on words

Abstract: During reading, the optimal landing position for visual word recognition in fluent reading is near to the centre of a word, which is typically aimed by ballistic eye movements (saccades). At this landing position, the visual information of the word is perfect, which is reflected in the fastest reading times and the lowest probability of making an additional eye fixation. In contrast, when a reader lands at the beginning or the end of a word, reading times and the number of fixations increase. This pattern of effects is accompanied by an effect that is, in first sight, counterintuitive. The duration of the first fixation shows the exact opposite pattern of reading times with the shortest durations after landing at the beginning or the end of a word and the longest durations after landing at word centre. This inverted effect of landing position is central to the talk and reflects a correction mechanism that is a requirement for fluent reading and therefore allows distinguishing between different origins of slow reading. In the talk I will present data from several paradigms (e.g. corpus data) to describe this correction process in fluent readers and additional data, from slow readers, to investigate the role of such a correction mechanism in the origins of impaired reading.