**Question #1:**

**Title: On-the-Move and in Your Car: An Overview of HCI Issues for In-Car Computing**

**Abstract:**

The introduction of computing and communications technologies within cars raises a range of novel human-computer interaction (HCI) issues. In particular, it is critical to understand how user-interfaces within cars can best be designed to account for the severe physical, perceptual and cognitive constraints placed on users by the driving context. This article introduces the driving situation and explains the range of computing systems being introduced within cars and their associated user-interfaces. The overall human- focused factors that designers must consider for this technology are raised. Furthermore, the range of methods (e.g: use of simulators, instrumented vehicles) available to designers of in-car user-interfaces are compared and contrasted. Specific guidance for one key system, vehicle navigation, is provided in a case study discussion. To conclude, overall trends in the development of in-car user-interfaces are discussed and the research challenges are raised.

**Summary:**

This article puts light over the issues related to HCI systems that are being introduced inside the car. The System designer must take some factors into account that what are the different problems that are being faced while driving and navigation. Due to increasing technology these user-interfaces are compared and updated in order to resolve the upraising issues related to development of these systems.

**Question #2:**

**Title: Research on Human-Computer Interaction Design of Office Chair Based on QFD Method**

**Abstract:** Based on quality function deployment (QFD) and emotional design theory, the psychological needs of users are explored, and the interactive design system of office chairs is developed centering on users, thus solving the problems of space efficiency, office mode and human-computer interaction. First of all, through the relationship between the emotional concept and “function-behavior-benefit” in QFD method, from the perspective of emotional experience, the man-machine relationship is analyzed, and the principles and methods of contemporary office chair comfortable and healthy experience design are summarized. Secondly, based on the product structure and human-computer interaction design, the internal demand of consumers is transformed into the actual demand of products, and the QFD house of quality model is output to obtain the best design scheme. Finally, through design demonstration, the integrated application of emotional design and QFD method is feasible and effective, which can form a mapping relationship between product benefits and user needs, thus realizing the man-machine interaction design of multi-adaptive office chairs.

**Summary:** A design of an interactive office chair built around the needs and requirements of the user which delivers value and solves the problems of space, office mode and HCI making Quality function deployment as its basis. Firstly, the relationship between man and machine is analyzed by keeping in mind the emotional impact that the machine leaves on the user’s brain or the emotions that the user experiences whilst interacting with the machine and the principals and methods of an ideal, comfortable and healthy-experience design of an office chair are summarized. Secondly, The QFD house of quality model built to represent the actual product in demand and to obtain the best design for the product to be developed. At the end the costumer needs are mapped to the product benefits and the design of an multi-adaptive office chair is implemented.

**Question #3:**

**Title: The Interactive Workspaces Project: Experiences with Ubiquitous Computing Rooms**

**Abstract:** Ubiquitous computing embodies a fundamental change from traditional desktop computing. The computational environment is augmented with heterogeneous devices, choice of input and output devices, mobile users, and contextual information. The design of systems and applications needs to accommodate this new operating environment. In this paper, we present our vision of future computing environments we term User Virtual Spaces, the challenges facing developers, and how they motivate the need for new application design. We present our approach for developing applications that are portable across ubiquitous computing environments and describe how we use contextual information to store and organize application data and user preferences. We present an application we have implemented that illustrates the advantages of our techniques in this new computing environment.

**Summary:** Ubiquitous computing, unlike traditional desktop computing is universal and can be used at any time, at any location and in any format, this essentially makes computing a part of everything and an component of our environment where it just moves to the background and submerges itself in the environment. Different kinds of devices, choice of inputs and outputs is integrated in the computational environment. For this purpose, the systems, applications and devices must be designed in such a way that they could be easily incorporated in such an environment. This paper presents the concept of future computing termed as “user virtual spaces”, the problems that are faced by the developers and how they inspire us to come up with application designs. The approach for developing applications that can be incorporated across ubiquitous computing environment is presented and the description of how contextual information is used to store and organize application data to optimize user experience. At the end of the paper an application is presented shows the benefits of the methods incorporated in this new computing environment.

**Question #4:**

**Title: Voice as a Design Material: Sociophonetic Inspired Design Strategies in Human-Computer Interaction.**

**Abstract:** While there is a renewed interest in voice user interfaces (VUI) in HCI, little attention has been paid to the design of VUI voice output beyond intelligibility and naturalness. We draw on the field of sociophonetics - the study of the social factors that influence the production and perception of speech - to highlight how current VUIs are based on a limited and homogenised set of voice outputs. We argue that current systems do not adequately consider the diversity of peoples’ speech, how that diversity represents sociocultural identities, and how voices have the potential to shape user perceptions and experiences. Ultimately, as other technological developments have influenced the ideologies of language, the voice outputs of VUIs will influence the ideologies of speech. Based on our argument, we pose three design strategies for VUI voice output design - individualisation, context awareness, and diversification - to motivate new ways of conceptualising and designing these technologies.

**Summary:** Despite having a newfound interest in voice user interfaces that let you speak to them and reply back using voice/speech, there is not much attention to the detail of natural these voice system sound or how easily they are understood. Based on the field of sociophonetics (the study of the social factors that influence the production and perception of speech), the highlight is made as to how the current VUI’s all have a set of limited and similar voice outputs.IT is argued that in reality, the peoples’ speech is much more diverse, which represents their social and cultural identities, and that voices and speech have the power to change how a person perceives and experiences something. The voice outputs of VUI’s will have a profound effect on how speech is viewed. Three design strategies are presented the design of VUI voice output, namely individualisation, context awarness and diversicfication.