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You can assist us in our efforts by sponsoring graduate research assistantships, providing materials, subsidizing travel expenses, etc.

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## DOCTORAL RESEARCH PROGRAM

PEOPLE INSIDE



BACKGROUND, FOCUS AND GOALS

# HOW PEOPLE AND INDOOR SPACES INTERACT

**BACKGROUND**

Have you ever stopped to wonder how the rooms where you spend your time each day affect your health, your sense of well-being and your performance? Central Europeans spend more than 80% of their working hours in offices or other enclosed spaces, but are these really optimally designed for the purposes for which they are used? Both, a person's performance and sense of well-being, are closely connected with factors involving his or her surroundings. This includes the space in which we spend our time. People and spaces: the two influence each other, i.e., it is we who design our living and working space, but it is this space, in turn, that influences us, too. As a result, enclosed spaces – whether in buildings or vehicles – should be designed in such a way that users can perform to their capabilities at all times, remain psychologically and physically healthy in the long term, and enjoy a sense of well-being.

**FOCUS**

The focus of the research group is directed at precisely this interaction of people and spaces. To date, research and applica-

tions efforts have, for the most part, been devoted to an attempt at improving comfort levels for users of enclosed spaces. The interest of a business, on the other hand, is not only to create



a pleasant working environment; instead, its intention is to devise a well-thought-out design of its space that will maximize the economic efficiency of the area involved. These considerations are affected by a variety of different aspects, depending upon the industry/activity involved. In call centers, for instance, the challenge is to optimize acoustic con-

ditions to permit the best possible use of the existing space. In supermarket and jewelry stores, on the other hand, there is a greater focus on professional lighting design, which has a decisive effect

on the way products are received and, hence, on sales figures. Finally, in a workplace context, the aim is to optimize not only light and acoustics but room temperature as well, since rooms that are too warm or stuffy can exhaust users' psychological resources – making it impossible for even the most motivated employee to work productively.

WINSTON CHURCHILL

# “WE SHAPE OUR BUILDINGS AND THEY SHAPE US”



The influencing factors among those that will be considered in the “People Inside” research group include physical and psychological parameters, and interactions between the two. The physical parameters include aspects such as noise, light, color, perceived air quality and warmth. The psychological factors feature thought processes, emotions, motivation and behavioral adjustments that play an important role for the individual and for interactions among people (in a team or in customer relationships).



**GOALS**

Working from this interdisciplinary re-

search approach, our group pursues several goals at the same time. A first intention is to diagnose and quantify basic relationships between parameters in building physics and psychological processes, and to identify factors in building physics that act as troublemakers and catalysts for performance and a sense of well-being. Our

second goal is to create an optimal fit between an individual's activities and the physical characteristics of the surrounding environment.

**SYNERGY**

Through the established links between building physics and psychology we are able to generate basic findings that will make it possible in the future to design enclosed spaces that – in terms of their thermal, hygienic, illumination, acoustic and olfactory parameters – will improve not only the performance but also the sense of well-being and psychological health of users of these spaces. Only an awareness of the interaction of space and human beings permits an optimization of the working and space requirements so that individuals are able to develop and maintain their full potential in the long term. Investigation of this highly practical set of issues is the core idea behind the “People Inside” research group.



## THE OBJECT OF THE PROGRAM

