



人性关怀
医疗养老建筑的研究与实践

Humanistic Concern
Research and Practice of Medical
and Elderly's Architecture

张家港第一人民医院，江苏，中国
Zhangjiagang First People's Hospital, Jiangsu, China, 2007



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项目信息/Credits and Data

设计团队/Design Team: 孟建民, 邢立华, 杨旭, 冯志勇, 侯军/MENG Jianmin, XING Lihua, YANG Xu, FENG Zhiyong, HOU Jun

用地面积/Site Area: 112,000m²

建筑面积/Floor Area: 126,000m²

设计时间/Design Time: 2003

张家港市第一人民医院的设计是2003年一次设计竞赛的胜出作品。该医院选址于张家港市西北部的开发区内,是张家港市政府建设的重点工程项目。基地周边除零散居住区尚未开发外,几乎没有更多的城市因素影响该项目的规划与设计。其设计由于自身独特的完整形态及引入现代化的“医院城”概念而显得与众不同。方案最大的特色是在整体结构上设计了“医院街”——一个贯穿医院建筑的公共体系,将门诊、急诊、医技、住院、会议、行政办公、科学研究、教学培训、后勤服务等综合功能有机组合在一个简洁的“圆形”建筑内,为所有人创造了一个生动的景观空间。

住院大楼位于建筑北部,为17层弧形板式建筑,每层2个护理单元,共设有1000张床位。门诊、急诊、医技、行政办公与科研教育用房共同组成裙房。“医院街”是整体建筑空间逻辑的主级结构,各功能区通过“街”来组织,暗示了医院内部的逻辑关系;在各医疗单元之间则引入形式丰富的庭院,提供通风与采光,大量的绿色植物为病人、来访者和医院的员工创造了一个舒适的就医和工作环境。

门诊、急诊、出住院、行政办公、来访、会议分别有独立的出入口。儿科、120急救中心、输液区、影像中心设置在一层。造型呈“蛋”状的400人学术报告厅为独立的单体建筑,结合浅水池构成浮在水面的壳体建筑,与门诊主入口、“医院街”入口一起形成独特的人口形象。功能检查、中心实验区、门诊药房、腔镜中心围绕着公共空间设置在二层。门诊大厅是一个4层高的阳光大厅,与“医院街”相对独立又紧密联系,成为组织患者就诊的重要空间。候诊厅面对着一个有绿化的院子,患者在各医疗单元均有独立的病患通道,同时在各医疗单元远离“街”的尽端,设计了医护人员专用的公共交通体系及独立的医辅用房。三层手术部设有16间手术室,与重症监护ICU通过清洁廊便捷联系,病理检验与手术部共同围绕着一个空中庭园。四层设计了网架体系,形成生态化的屋顶花园,有效减少“热岛效应”,为住院人员提供安静的活动场地。整个建筑设置局部地下室,以提供大楼的动力设备机房、营养厨房、中心消毒供应室、污物转运及大型地下停车场。□

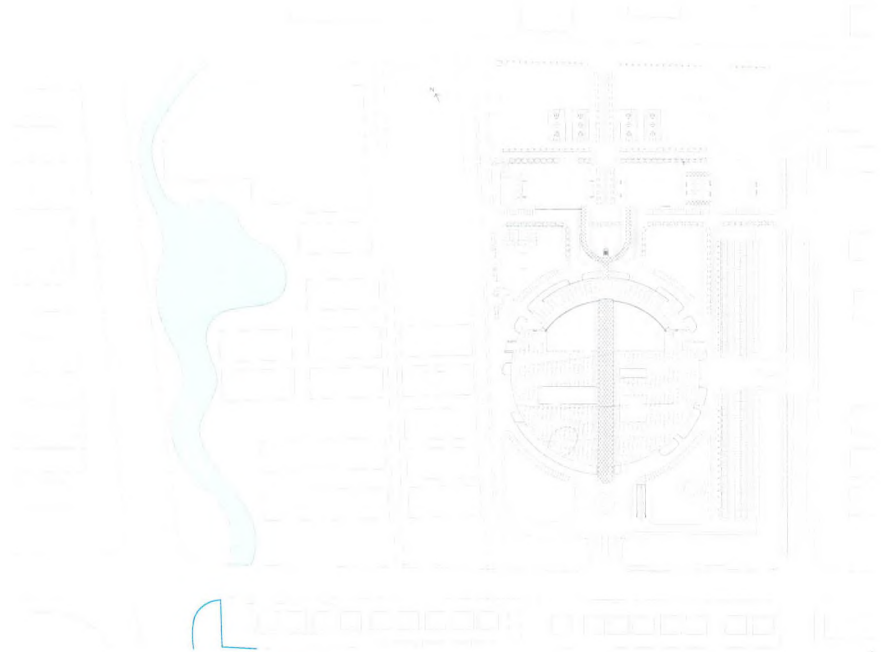
1.2 外景/Exterior views



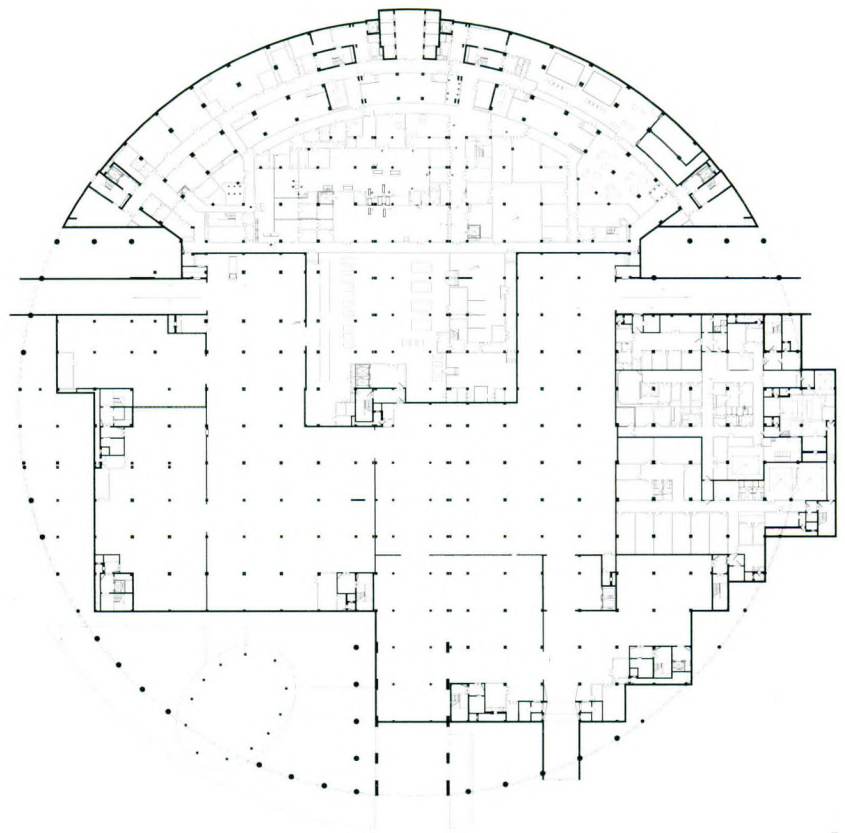
The design of Zhangjiagang First People's Hospital is the winning entry of a design competition held in 2003. The hospital is located at the development zone in the north-west part of the city, and is one of the key architecture projects by the municipal government of Zhangjiagang. The site area is barely developed except for a few scattered living quarters. Therefore, hardly any urban factors pose hindrances to the planning and design of the project. The design distinguishes itself from other healthcare facilities for its unique wholeness and its introduction of the modern concept of "Healthcare Promenade": a public system which integrates the clinics, emergency rooms, technical department, inpatient department, conference rooms, administrative offices, scientific research labs, training center, facility management and maintenance in a compact, circular structure, and creates an interactive and harmonious space for all visitors.

The inpatient building is situated at the north of the Promenade. It is an arc-shaped seventeen-story building with two nursing units on each floor and has a capacity of 1000 beds. The clinics, emergency rooms, technical department, administrative office, the scientific research laboratory and training center together make up the podium. The Promenade acts as a datum, organizing all programs spatially around it to indicate the internal organizational logic of the hospital. A wide variety of courtyards is introduced between medical units for ventilation and natural daylighting while the greenery creates a comfortable environment for patients, visitors and staffs alike.

The outpatient clinic, emergency rooms, admission offices, conference rooms and visitors lobby have independent entrances and exits. The pediatrics, Medical Emergency Center, infusion area, and media center are on the first floor. The egg-shaped lecture hall, seemingly floating on a basin, is designed and placed on the axis of the Promenade. It connects the main entrance with the outpatient department visually and creates a unique image for the Promenade entrance. The function test unit, central laboratory units, the outpatient pharmacy and endoscopic center are placed and arranged around a public space on the second floor. The outpatient hall, a four-story building which is relatively independent yet closely connected with the entrance of the Healthcare Promenade, is an important space for assigning patients to different medical branches. The waiting area faces a courtyard. The design creates independent hallways for patients' circulation to each medical unit; while dedicated corridors and separated preparation cells for medical staffs are located on the other side of each unit away from the main Promenade. The Surgery Department on the third floor has 16 operation rooms and is conveniently connected with the intensive care unit by an aseptic corridor. The two departments are arranged in a circular manner forming a courtyard on the third floor. With the wire framing system, the fourth floor is designed as an ecological roof garden to effectively mitigate the heat island effect while providing a quiet venue for inpatients. Finally, the basement is designed and equipped with a mechanic room, a nutrition kitchen, a sterilization center, medical waste transit and a large underground parking lot. □



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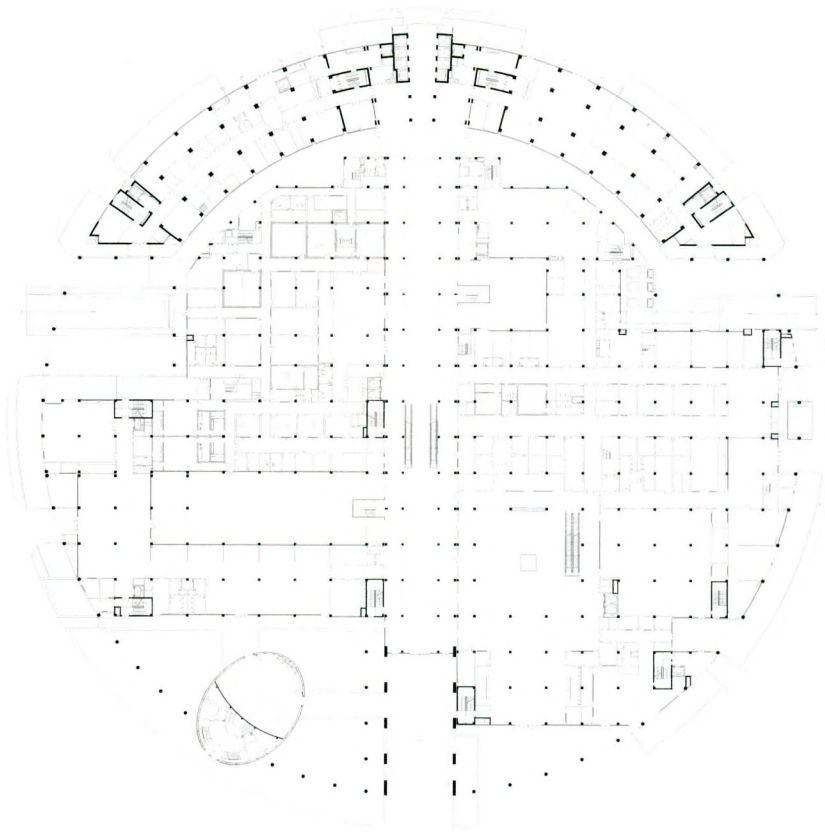
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- 3 外景/Exterior view
- 4 总平面/Site plan
- 5 地下一层平面/Floor B1 plan

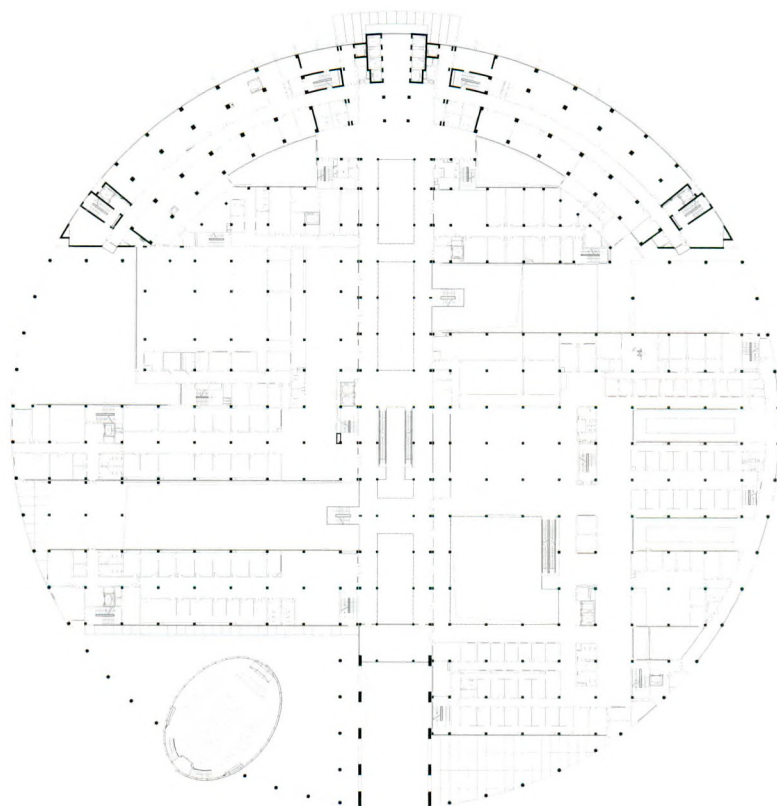


6 外景/Exterior view





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7 首层平面/Floor 1 plan
8 二层平面/Floor 2 plan
9 内景/Interior view



评论

张万桑：孟建民先生于2003年设计、2007年7月竣工的张家港市第一人民医院，通过将简洁的“圆”与“井”这两个图层叠加所产生的形式张力引导出医院功能的各项秩序。令人联想到1980年代末期MoMA解构主义诸大师对各图层纯粹功能及形式独立性的探索，及其相互作用衍生出无穷深入空间可能性的探索。从柏拉图到蒙德里安，从密斯到库哈斯、屈米，对抽象几何与功能间可能达成的对话与妥协从未停止。

屹立于21世纪初期高速发展与混乱并存的中国的这座医院以其孤岛般的内敛气质，带给使用者平和安宁的心境。每项功能元素自身被赋予清晰的可读性，又被约束在一个圆形边界内并形切割出的严整秩序之中。圆形的边界控制让建筑的各方向均具有等时的可达性；圆形边界的开放性又使得从外部各个方向到来的人们具备了平等的可达性。

长方形边界的内庭院为医院各处带来风、光和宁静的花园，让人想起古老中国的庭院；而外围高耸的环形柱廊在体现出西医医院身份的同时，进一



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Comments

步强调了医院作为公民公共活动空间的场所特征。这些被“切除”的负空间也为日后生长为建筑的正空间留有余地，在那个时期已经具备了场景导向设计的端倪。

可能众多使用者在此感受到对医疗行为的尊重和信仰，感受到这座医院如同一个医疗关怀的圣殿；然而我，看到的却是一位建筑师对一座医疗综合体理想模型的探索 and 追求，以及这种模式对未来医院设计的启发。

Vincent Zhengmao Zhang: Zhangjiagang First People's Hospital, designed by MENG Jianmin in 2003 and completed in 2007, is functionally organized by a formal combination of two simple shapes, a circle and a water-well shape. It reminds us of the exploration of the pure function and independence of forms, as well as the spatial possibilities derived from their interactions, by those MoMA deconstruction masters in 1980s. From Plato to Mondrian, from Mies to Koolhaas and Tschumi, we can see that the conversation and compromises between abstract form and function have never come to an end.

In the early 21st century, with a lot of chaos in the fast developing China, the hospital stands out as a lonely island with its conservative manner, providing a peaceful atmosphere for its users. Each functional element is given a clear readability while they are confined within a circular boundary, which helps to maintain the orderliness as a whole. The control of the

circular boundary enables equal accessibility towards every direction of the building; moreover, the openness of the circular boundary makes democratic access for people coming from different directions.

The rectangular inner courtyard brings fresh air and light as well as tranquil gardens to every corner of the hospital, which calls to mind the traditional Chinese courtyard; the tall ring colonnade at the periphery implies the identity of a western hospital while the public character of the place is further emphasized through it. These "subtracted" negative spaces also provide room for the positive space to build, which is an early sign of scenario-oriented design method.

For most users, they might gain respect and faith for medical treatment since this hospital serves as a sanctuary of medical care; for me, however, I see an architect's exploration and pursuit of an ideal model for medical complexes and its enlightenment to the future model of hospitals. (Translated by QI Yiyi)



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周颖：现代医院既要反映医疗技术的快速进步，也是社会经济与地域文化的集中体现。因此，医院建筑设计的中心课题可以概括为在经济许可的范围内对医疗效率与人文关怀两个方面进行充分调和，以迎合患者、医护人员以及医院管理者等各方的不同诉求。当前，我国医院建筑的特点是规模大小和功能复杂度等方面均大大超过了以往，因而简单套用传统的做法或国外经验均不足取，建筑师必须在设计实践中探索适合国情的新途径。在近年来涌现出的众多作品中，孟建民院士主持设计的张家港第一人民医院是一个非常成功的范例。

该医院的设计充分贯彻了孟院士提出的“医院城”的理念。其中最显著的特色是通过一条贯穿医院整体的医院街，将门诊、急诊、医技、住院、行政管理、会议、科学研究、教学培训、后勤服务等部门有

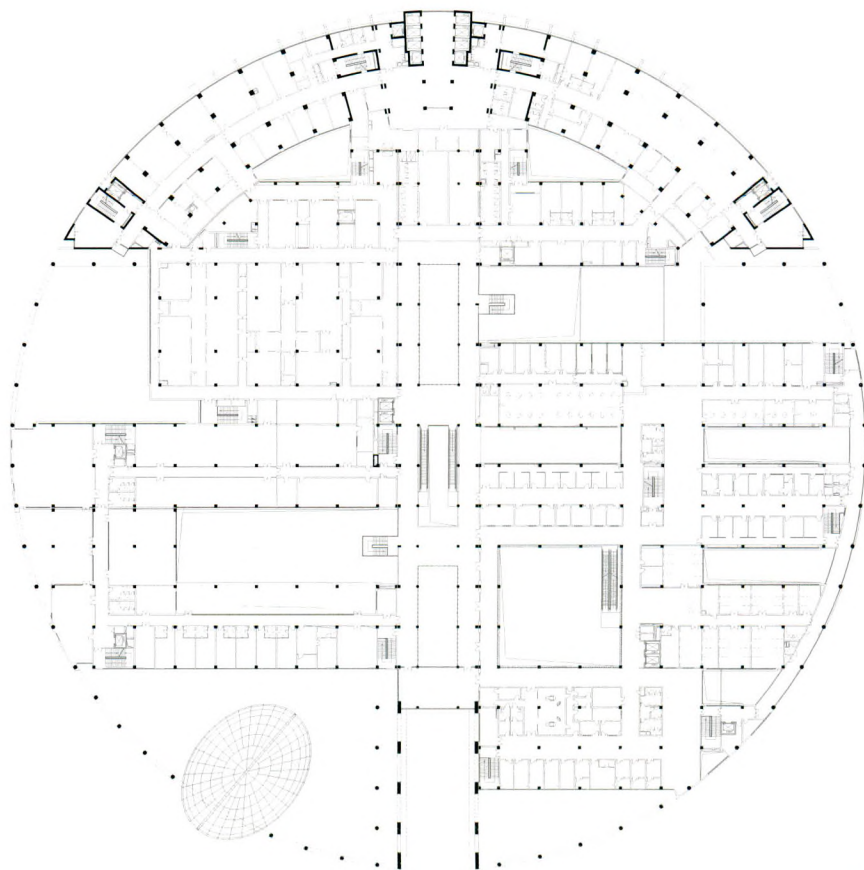
机组合在一起。建筑造型简洁美观。医院整体布局合理、结构清晰，各类流线便捷而互不干扰，各功能区域既相对独立又紧密联系，并在功能区域内部充分实现了医患分离与洁污分流。在情感空间的营造方面，室内的医院街与室外的景观水池、廊柱等元素巧妙地融合在一起，在医疗单元之间则设计了形式丰富的庭院，为患者和医护人员创造了一个温馨舒适而又充满情趣的就医与工作环境。上述设计手法，均体现了建筑师独具的匠心和深厚的功力。

值得一提的是，该医院建成于十多年前，在这段期间，我国医院建筑设计的理论和实践均有很大的提高与发展。但张家港第一人民医院的设计理念与手法并没有过时，而是充分经受住了时代的考验，非常值得我国广大从事医疗建筑设计的建筑师与研究人员学习借鉴。

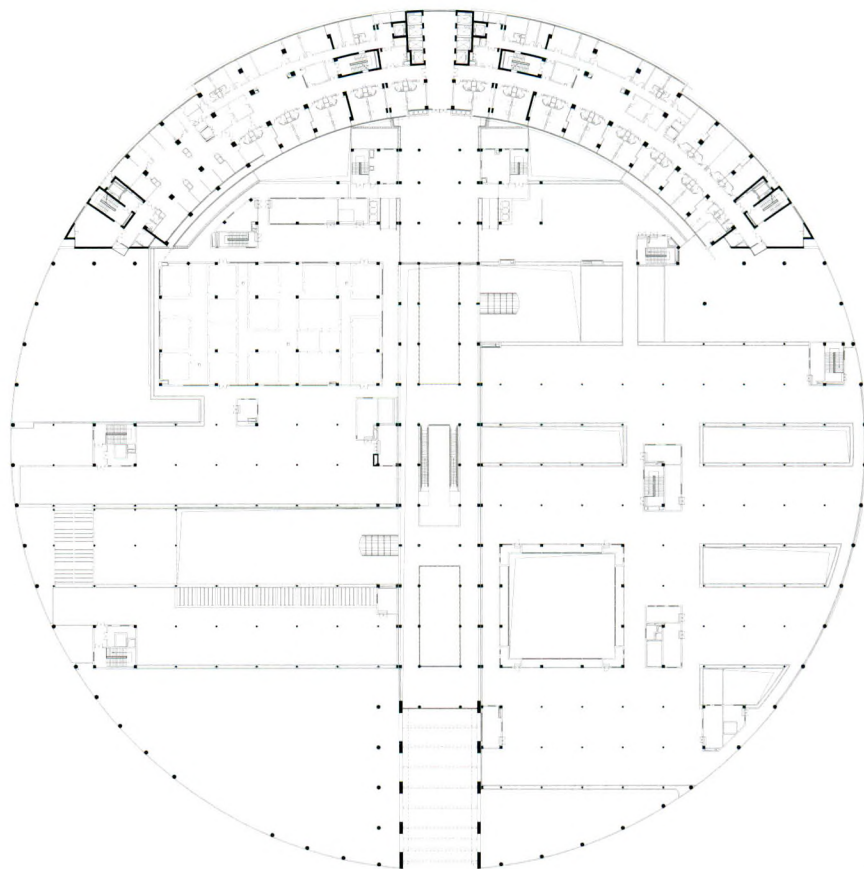
ZHOU Ying: Contemporary hospital architecture should not only reflect the fast development of medical technology, but also be the embodiment of social economy and local culture. Therefore, the key to hospital architectural design could be summarized as: in order to cater the needs of different groups such as patients, medical staff and hospital administrators, it should strike a balance between medical efficiency and humanistic care within the tolerable scope of economy. At present, the main feature of Chinese medical architecture is that the scale and functional complexity go far beyond those in the past. So instead of simply applying traditional practice or foreign experience, architects should explore new ways suitable for China in the course of their design practice. Among the countless projects appeared these years, Zhangjiagang First People's Hospital designed by Academician MENG Jianmin is a very successful case.

The hospital design fully reflects the "hospital town" concept proposed by MENG, of which the most striking feature is that the main hospital Promenade runs throughout the town. It organically links the following departments: outpatient, emergency, medical technology, in-patient, administration management, conference, scientific research, teaching and training, and logistic services. The exterior form of the building looks simple and beautiful. The overall layout is quite reasonable and the structure is pretty concise. So various circulations do not interfere with each other and different functional zones are relatively independent while intensely connected. Also, the doctor-patient separation and the separation between the clean and the polluted are achieved within each functional zones. As for the aspect of emotional space creation, the interior promenade combines ingeniously with the exterior elements such as the landscape pool and corridor columns. Between those medical units, a variety of courtyards are designed to provide a sweet, comfortable and interesting working atmosphere for the patients and medical staff. The above design methods fully show the designer's originality and profound skills.

It is worth mentioning that although the theory and practice of hospital architectural design has improved and developed a lot in the past decade, Zhangjiagang First People's Hospital, which was completed more than ten years ago, is not outdated. It has successfully withstood the test of time. Thus, for our architects and researchers who practice on hospital architecture design, it is worthwhile to learn from it. (Translated by QI Yiyi)



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- 10 内景/Interior view
- 11 三层平面/Floor 3 plan
- 12 四层平面/Floor 4 plan