Chalukyas of Badami who ruled over the vast areas of the South India from Narmada to Kaveri, known for their military strength had earned the title ‘Karnataka Bala’, which also finds a mention in several inscriptions. Inscriptions also speak of Chalukyas having conquered the islands of Revati and Rajapuri in the present States of Maharashtra and Odisha respectively.

Badami, Aihole and Pattadakal were also important administrative and cultural centers. Badami which was strategically located was chosen as their capital after Aihole. Fortifications of all the three places besides Mahakuta and Alampur centres were also undertaken. The fortifications were their pride, it was a symbol of power built to protect citizens, temple complexes and treasury. Viragals also speak of the sacrifices made to protect these forts, temples assets, and the empire.

After the Chalukyas, these cities continued to be important centers under the successor powers down to Tipu. Narasimhavarrman Pallava is also said to have held sway for a short span of time. Inscriptions of the Rashtrakutas speak of Badami and Aihole being administrative centres and hence the fortification and reconstruction of the fort of Pulikeshi -1. Vijayanagara Inscriptions of speaks of the construction of a new fort at Badami as well reconstruction of old forts undertaken so as to safeguard Badami from the Bahamanis and the Shahis. The Nawabs of Savanur and later the Peshwas took hold over Badami. It then passed into the hands of the Mysore Sultans and Tipu added a new fort alongside renovation and reconstructions of existing forts. Badami, which was passed on from one power to the other itself, speaks of its historicity and relevance. Significance of Badami lies in the fact that the forts erected by various powers point to not only development of fort architecture but also exhibits the changing patterns of
defence technology down the centuries. Badami also stands forth as an example of being the only place to have had four fortifications ranging from 6th to 18th centuries.

**Aim**

To identify the forts belonging to four different periods and other structures that was built with the intention of defending the region. The architectural development of forts from early Chalukyan period to Tipu’s period is taken into consideration. The thesis traces the changes that took shape in the building technology at Aihole, Badami and Pattadakal. The changing patterns of the plans, fort walls, bastions, structural patterns, magazines, tanks, watch towers, guard rooms, sculpture and the materials used during various periods have all been analysed to understand the changing needs of defence from time to time. There are no full-fledged scholarly works available on area of study. But for Badami forts having been briefly examined S.K Joshi in his Defence Architecture in Early Karnataka, (Chapter-IV), the other sites Aihole, Pattadakal, Mahakuta and Alampur have not received any attention. Hence this is an attempt in the direction.

**Significance**

Earlier studies undertaken by researchers have not thrown sufficient light on the fort in the region under study. Most of the works focus on temples, palaces and other such civil buildings and rarely focus on forts. For over 30 years there has hardly been any research undertaken on the forts of Badami, Pattadakal, Mahakuta, and Alamplur in Mahbubnagar district in the state of Telangana which are connected with Chalukyas of Badami. A genuine effort has been made to survey and trace the fortified walls buried under soil and thick vegetation especially at Aihole. Buried walls were also located in the agricultural lands. Extensive field work also enabled unearthing several remains of brick structures and pottery remains of pre-
Chalukyan period. Regular consultations with renowned Archaeologists, Historians, engineers, Artists was of immense help in the undertaking of field work.

Aihole fort, which is considered to be oval in shape, has deviations near the Meguthi temple. It is a combination of Nela Durga and Giri Durga. In fact a new wall was discovered during the field work near the river Malaprabha river which is about 600 meters to the west side of the fort. This wall is located within the agricultural field of the Desai family of Aihole. Pattadakal on the other hand has been stated to be the first civil fort in Deccan by S.K Joshi. The thesis has made an attempt to document the entire stretch of the fort wall. Alampur important centre of art and architecture and has a Nela Durga where in the whole fort was measured during field work with the help of civil engineers whose services were sought for the study undertaken. Fort wall, next to river Tungabhadra is destroyed and is in ruins because of the construction work undertaken in recent times. As there is no conservation efforts in a few years even the existing ruins of fort may disappear. All parts of fort have been documented with diagrams, survey report, photographs and videography. The entire fort has been measured and documented in the thesis, and a comparative study has been undertaken. Mahakuta, a pilgrim centre has a cluster of temples within the fort wall. More than 18 temples are found. The measurement has been taken and documented. An ancient brick wall has been traced.

Area of Study

‘The Changing Patterns of Defence Architecture at Aihole, Badami and Pattadakal,’ focuses mainly upon fort architecture in the three places which well-known power centres and relevant politically, economically and were also important cultural centres. The study examines at length the defence architecture at Badami the only site that witnessed renovation and
reconstruction of the existing forts and addition of new forts from Pulakeshi-I to Tipu Sultan. Mahakuta and Alampur have briefly touched upon in the study. Structures located within the forts of Aihole, Badami, and Pattadakal such as temples, a dargah, civil structures, sculptures, tanks have also been included in the study. The remains in the fort as well as inscriptive evidences point to the changing patterns of architecture commencing from Pulakeshi-I, followed by Rastrakuta, Vijayanagara and Tipu Sultan.

Beside the field work undertaken at all the sites identified for the study visits were made to the forts at Malked, Halsi, Banavasi, Hanagal, Talikota, Bidar, Srirangapattana, Hampi, Majirabad, Devarahalli, Bangalore, Nandi, besides Srirangam, Tanjavur, Lothal, Agra, Delhi, Fatehpur Sikri, Torana, Raigadh, Gwalior and Nabha (Patiala District). Visits to the above forts was for a better understanding of the types of forts, patterns of architecture, technology and other aspects of fort architecture.

Methodology

The study is based mainly upon field work undertaken at the sites identified. Available Primary and Secondary sources have been tapped. The entire fortification areas have been surveyed, measured and documented. Satellite pictures have also been captured and the same compared with the actual fortification area at the base level. Assistance of Civil Engineers, Architects, Artists, Assistant Archaeologists, Photographers and locals were sought for the study. Remains of the walls, pottery remains, Veeragals which have been unidentified as they were covered by soil and thick vegetation were unearthed during the exploration.

Review of Literature
There are innumerable standard works on religious art and architecture and many dealing with Badami Chalukyas in particular, with hardly any studies on fort architecture... S.K. Joshi in his ‘Defence Architecture in Early Karnataka’ has one chapter on Badami fort. There are many PhD thesis, and other works on sculptures, art, painting, cave temples etc, but hardly any work is available on defence architecture. In A.S.I Annual report, State and District Gazetteers, under the section references there are no books available about defence structures.

‘Deccan Forts’ of Kamalapur mentions the forts of Bijapur, Bidar and Raichur of medieval times without referring to the forts in the Bagalkot region. Works of Betageri Krishna Sharma and M. Chidananda Murty also have made passing references to forts. Sesha Sastry in his work, Karnataka Veeragallugalu mentions about, war, musical instruments, weapons, flags, arms, and animals used in wars. The book has pictorial depictions of different types of bows and arrow on Veeragals or Hero Stones. Scholars have also studied the sculptures on forts, and Veeragals but they do not specifically mention Badami forts, though they speak of defence architecture and weapons used though the ages.

Thus there is no serious, systematic, authentic work giving an entire account of forts of Badami, at Aihole, Pattadakal, Mahakuta and Alampur. The thesis has thus tried to study these neglected forts. At Badami and surrounding areas mentioned above, a detailed survey of these forts was thus found necessary and therefore an intense research was undertaken.

The thesis is based on the actual field survey and Satellite pictures, maps, survey reports, scathes, line drawings all collated to understand defense architecture in response to changing political conditions from 6th century to 18th century along with advanced technology of armors and trends of wars.
Further, other manuscripts and available literary works on defence architecture like Arthashastra, Shilpa texts, Vishwakarmasamihita, Vedas have been referred for a study of Forts at Badami, Aihole and Pattadakal and surrounding sites in accordance with the important ruling dynasties and in chronological order from the period of Chalukyas to the period of Tipu has been traced.

The region of Badami, located in the hill range of Kalathgi which starts from Belgaum district and passes through Bagalkote. Badami naturally had no water sources but yet it was selected as capital by Pulakeshi-I in 543 A.D. Architects and engineers well versed in Shilpasastras and building forts, appears to have taken into consideration the regional ecological conditions such as the rock material, the topography of the region, the drainage system, forest, availability of natural resources building material and human resources etc., and, later accordingly the actual fort construction was done in accordance with architectural principles.

Chapterisation

The opening Chapter gives a glimpse of the development of fortification in India commencing from the Harappan to the modern times. Light is thrown on the various Shilpa Texts, Agamas, Epics, Manusumithi, Arthashastra and other works for an understanding for fort architecture in India.

In Chapter II traces the history of defence architecture from Satavahana to the times of Tipu Sultan.

Chapter III discusses the Historicity of Badami from pre historic to the modern times. The architectural developments during the various periods of history have also been examined.
The following Chapter IV has attempted a detailed study of the fortification at Aihole, Badami and Pattadakal in addition to Mahakuta and Alampur. Which were important political, economic and cultural centres of the Badami Chalukyas.

Chapter V focuses upon the developments after the Badami Chalukyas. The Fortification and defence technology adopted by the various dynasties – Rastrakutas, Vijayanagara down Tipu Sultan at Badami is discussed elaborately.

The focus of Chapter VI is a changing pattern in defence technology from the 6th to 18th century. An analysis of the changing architectural patterns, weaponry used compelling changes in technology have been made.

Chapter VII presents a summary of the findings. References are given at the end of the Thesis.