

# Curriculum Vitae

**MUDATHIR SULIEMAN MOHAMED ALI**



**B.Sc., M.Sc., Ph.D., AMICE, AMCS, FSES, CO.SEC**

## **(1) PERSONAL PARTICULARS:**

**Nationality** : Sudanese  
**Languages** : Arabic: Mother tongue, English: Medium of instruction  
**Date of Birth** : 1/1/1957  
**Place of Birth** : Shendi, River Nile State, Sudan  
**Marital Status** : Married with five children (aged 25,23,20,16,16)  
**Present Occupation:** Director General, University of Khartoum Consultancy  
Corporation (UKCC)  
**Address:** University Avenue  
Tel: 00249-123013955  
Email: [dr.mudathir@gmail.com](mailto:dr.mudathir@gmail.com)

Associate Professor - Civil Engineering Department,  
Faculty of Engineering - University of Khartoum.

## **(2) ACADEMIC QUALIFICATIONS:**

- Ph.D. (Civil Eng. - Structures), University of Glasgow, Scotland, UK (**1986**).
- M.Sc. (Construction Engineering & Management), University of Leeds, England, UK (**1983**);
- B.Sc. (First Class Honors) in Civil Engineering, University of Khartoum, Sudan (**1980**).

## **(3) COUNTRIES VISITED:**

Egypt, United Kingdom, Belgium, Holland, Syria, Lebanon, Jordan,  
United Arab Emirates, Germany, Sultanate of Oman, Bahrain, Romania, Turkey, Qatar,  
Saudi Arabia, India, Tunisia, Malaysia, Kuwait, China, Thailand, Spain, Greece, Chad.

## **(4) AREAS OF SPECIALIZATION:**

- Construction Engineering and Management:  
Concrete Construction, Construction Economics, Construction Management,  
Construction Contract Management, Claims & Dispute Management, Arbitration.
- Project Management.
- Structural Engineering: Mechanics of Materials, Theory and Design of Structures.

## **(5) PROFESSIONAL SOCIETIES:**

- AMICE Associate Member, Institution of Civil Engineers, England, UK, **1982**.
- AMCS Associate Member, The Concrete Society, England, UK, **1982**.
- FSES Fellow, Sudan Engineering Society, **2002**.
- CO.SEC Consultant Engineer, Sudan Engineering Council, **2003**.
- Member, American Society of Civil Engineers ASCE (USA), Membership #368404 (2000).
- Member of the Sudanese Engineering Council (Round 2015-2019).

- Member & Deputy Chairman of the Sudanese Engineering Society (Round 2015-2017).

## **(6) TRAINING COURSES ATTENDED:**

- Sudan Railways Workshops, Atbara, Sudan: Four weeks in **1977**, training on basic Mechanical and Electrical Engineering.
- Jebel Aulia Survey Camp, Sudan: 15 days in **1979**, field training on surveying.
- Ministry of Public Works, Khartoum, Sudan: Four months in **1980**, training on Structural Design and Construction Engineering.
- Course on “Concrete Technology”, Cement and Concrete Association, Slough, England, UK, **1982**, part of the M. Sc. studies.
- Course on “Teaching and Learning in Higher Education”, University of Strathclyde, Glasgow (Scotland), UK, **1986**.
- Course on Construction Contract Claims & Disputes, organized by the Arab Union of Engineers, Oman, Jordan, **2002**.
- Course on “Preparation and Execution of Electrical Power Projects Financed by BOT” , held on 5-10 July **2003**, Khartoum, Sudan, organized by the Islamic Development Bank and the National Electricity Corporation of Sudan.

## **(7) CONFERENCES AND SYMPOSIUMS ATTENDED:**

- Second International Conference on Civil and Structural Engineering Computing, ICE, London, 3-5 Dec. **1985**.
- National Seminar on Disaster Prevention and Management in Sudan, University of Khartoum and UNESCO’s Office in the Arab States (UNEDBAS), Khartoum, 17-19 March **1990**.
- Seminar on Leadership Improvement & Communication in an Organization, OATS Sudan & Japan, Khartoum 15-16 Jan., **1995**.
- Workshop on “Pozzolana in the Construction Industry in Sudan”, held in Khartoum, Sep. 1999.
- The National Engineering Conference on Roads, held in Khartoum, 5-8 Nov. 2002, jointly organized by the Sudan Engineering Society and the Ministry of Roads and Bridges.
- Arab Codes for Building & Construction, Cairo, Egypt, 2005.
- Symposium on: Road Transport in the Arab World, Khartoum, Sudan, March-2015.
- A number of other workshops and seminars related to the fields of specialization, both in Sudan and abroad.

## **(8) PROFESSIONAL EXPERIENCE:**

### **(A) PROJECT MANAGEMENT:**

- **1980:** Civil Engineer, Public Corporation for Building and Construction, Khartoum, (now the Sudanese Company for Building and Construction).
- **1987-1990:** Involved on Part-time basis in design, consultancy services, supervision and management in the construction industry, DAMAA Engineering Executions Company, Khartoum, Sudan. Positions held within the company were:
  - Manager of Engineering Directorate, **1987-1990**.
  - Acting General Manager, **1989-1990**.
  - Member of the Board of Directors, **1987-1997**.
- **1990-1999:** On secondment from the University of Khartoum to the Real Estate Development Company (a leading Sudanese construction and asset evaluation firm) filling the following capacities: Assistant General Manager and Head of Construction Directorate for two years, Deputy General Manager and later on (August **1996**) as General Manager of the company.
- **1999- 2002:** General Manager, Center for Engineering and Technical Studies (CETS), a professional academic center providing training services for practicing engineers on technology, management and computerization of engineering systems. Teaching load

was also undertaken, beside management of the center, on project management, asset evaluation, structural engineering and construction management. Teaching load with the Civil Engineering Department of the University of Khartoum continued as well during the period.

- **2006-2011:** Director of Engineering Affairs at the Project Implementation Unit (PIU) of Khartoum New International Airport (KNIA) Project, directing and managing all engineering activities of the project.
- **2011-2014:** Project Management Director (PMO) at Sudatel Telecom. Group, responsible of establishing a PMO within the group to guide manage and coordinate the Project's Portfolio.

**(B) CONSTRUCTION SUPERVISION:**

- **1988-1990:** Supervision of some of the University of Khartoum's new buildings as Structural Engineer (e.g. School of Dental Medicine).
- **1990-1999:** Overall supervision & directioning of all projects executed by the Real Estate Development Company as per positions held as Assistant, Deputy and General Manager.
- **2002- March 2006:** Overall supervision & directioning of all projects executed by Risaj Project Development Company as per the position held as Director General.

**(C) CONSTRUCTION CONTRACTING AND ARBITRATION:**

- Throughout, consultancies to contractors, engineering consultants on deriving construction contracts, claim preparation, dispute resolution.
- Participation in Arbitration as member of Arbitration Committees amounting to more than 18 cases so far.
- Registered Arbitrator with the Sudanese Center for Conciliation and Arbitration (SCCA), Airport Avenue, Khartoum, Sudan.

**(D) CONSULTANCY & STUDIES:**

- **1980-Present:** Prepared structural designs for many two to six storey office and residential reinforced concrete buildings.
- **1988:** Prepared structural designs of some of the new building extensions of the Faculty of Veterinary Sciences, University of Khartoum, in collaboration with the Chief Engineer's Office of the University, including an administration complex and a veterinary hospital.
- **1988-1989:** Co-prepared the bidding documents for the new building extensions of the faculty of Engineering and Architecture and the Faculty of Veterinary Sciences, University of Khartoum, in collaboration with the Chief Engineer's Office of the University.
- **1986-1990:** Contributed to many consultancy services offered by the Civil Engineering Department, University of Khartoum and DAMAA Engineering Executions Company, Khartoum.
- **1990-1991:** Member of a team for the investigation of the structural damage caused to Wad Nemeiri Co-operative society buildings, Omdurman. Report was adopted by the society and a court case was won against the construction company.
- **1992-1993:** Head of the team for preparation of the bidding documents of Wahat Al-Khartoum Project, a 4-tower reinforced concrete complex at the heart of Khartoum; total built area is about 80,000sq. meters (probably the biggest building project in the Sudanese capital for many years to come).
- **1992-1993:** Head of the team for the preparation of the cost estimate of Wahat Al-Khartoum Project. The evaluation formed a strong base for negotiation a construction contract with the selected contractor for the first phase of the project (1993).
- **1992-1993:** Head of the structural design team for Coptrade Tower, Khartoum, a 15-storey reinforced concrete building including a single basement, to be built on a 625 sq. meters plot.

- **1992-1993:** Head of the team for preparation of the bidding documents of Coptrade Tower, Khartoum.
- **1992-1993:** Member of the design team for Alfatih University of Darfur, Heading the sub-group responsible for preparation of the contract conditions, specifications and bills of quantities.
- **1993-1994:** Member of the design team for Elneilein University Administration Complex in Khartoum, heading the sub-group responsible for the preparation of the contract conditions, specifications and bills of quantities.
- **1995:** Head of a Committee for the Review of the Payment Scheme and Job Description of the Sudanese Company for Building and Construction.
- **1996:** Co-prepared the bidding documents for the remedial structural and civil works of the Gazeira Tower at Wad Madani (owned by the National Social Insurance Fund).
- **1996:** Head of a Team for preparation of the Conditions of Contract, Specifications and Bills of Quantities of the Sudanese-French Centre (the first phase of the project is already built and operative); documents were prepared for EPAC-KARPLEN Consultants.
- **1997:** Prepared a report on the problems of the completion and hand-over of the new buildings of the Sudan Currency Printing Press, Khartoum.
- **1996:** Prepared, within a group of Engineer's, a comprehensive study for importing and erecting a number of pre-engineered steel bridges (Bailey-Type) for the Sudanese National Development Corporation. The plan was adopted and the bridges were erected in various locations in Sudan.
- **1998:** Member of a Technical Committee for deciding on the Alternative Design Proposals of Tuti Bridge, Khartoum. Committee was formed by Khartoum State Governor. Work was later extended to involve negotiating finance and operation agreement with the National Social Insurance Fund.
- **1988-1989:** Follow-up Committee for the new buildings of the Faculty of Engineering, University of Khartoum, Role was to look after the contract conditions, bills of quantities and specifications.
- **1991:** Member, Evaluation Committee for the Proposed Designs of the Peoples Armed Forces Hotel, Khartoum. Five designs, for a five-star hotel on a 6000 square meters plot, were evaluated and rated.
- **1995-1996:** Team Leader for the company evaluation of the Real Estate Development Co. Evaluation was carried out for the purpose of shares transfer for new owners of the company. Participated actively in all negotiations that followed the evaluation process up to the signature of contract with the new share holders on 31/Dec./1996.
- **1990-Present:** Carried out several asset evaluation tasks for the purpose of bank guarantees (most of which was carried out by the Real Estate Development Co. Ltd. for Faisal Islamic Bank as the main customer plus some other customers).
- **2000 – 2001:** Member of the Consultative Council, Innovators Company for Investment and Contracting. Council's duration relatively short for the assistance in establishing the companies various systems at the beginning of its live.
- **2000:** Member of the Committee for the restructuring of the "National Company for Roads and Bridges" for it's then planned privatization.

**(E) EDUCATION & TRAINING IN CAPACITY BUILDING:**

- **1981:** Teaching Assistant, Civil Engineering Department, Faculty of Engineering and Architecture, University of Khartoum, Sudan.
- **1981-1986:** On Scholarship to the United Kingdom for Post-Graduate Studies.
- **1983-1986:** Part-time Demonstrator in Classes on Reinforced Concrete Design, Civil Engineering Department, University of Glasgow, during the Ph.D. research.
- **1986-Present:** Lecturing in Civil Engineering (Theory and Design of Structures, Engineering Economics & Construction Management), Faculty of Engineering and

Architecture, University of Khartoum, Sudan; the following courses were undertaken throughout the period:

- CE ST17 Construction Management, M.Sc. Structural Engineering Course, First Semester, **1987/88**, repeated **1995/96**, **1999/2000** and **2001/2002**.
- CE427 Engineering, Economics and Management, Fifth Year Civil Engineering, Second Semester, **1986/87 – Present**.
- CE 527 Construction Management, Fourth Year Civil Engineering, First Semester, **1986/87 – Present**.
- CE419 Design of Structures II (Steel Design), Fourth Year Civil Engineering, First Semester, **1987/88**.
- ChE 313 Process Equipment Design (Structures), Third Year Chemical Engineering, First Semester, **1988/89**.
- CE528 Elective: Selected Topics on Construction Management, Fifth Year Civil Engineering, Second Semester, **1988/89**, repeated **1992/93**.
- CE215 Mechanics of Materials I, Second year Engineering (General Class), First Semester, **1989/90-1990/91** and **2002 - Present**.
- CE225 Introduction to Civil Engineering, Second Year Engineering (General Class), Second Semester, **1989/90**.
- ARC325 Building Administration II, Third Year Architecture, Second Semester, **1991 to 1995**.
- ADR426, Engineering Management, 4<sup>th</sup>. Year Civil Engineering, Faculty of Engineering, University of Khartoum, 2012-Present.
- CE528 Elective, Selected Topics in Construction Management, 5<sup>th</sup>. Year Civil Engineering, Faculty of Engineering, University of Khartoum, 2012-Present.
- Advanced Construction Management, MSc. Structural Engineering, Civil Engineering Department, Faculty of Engineering, University of Khartoum, 2015-Present.
- CE217, Mechanics of Materials-1, 2<sup>nd</sup>. Year Civil Engineering, Alhikma College of Science & Technology, 2014-Present.
- CE224, Mechanics of Materials-2, 2<sup>nd</sup>. Year Civil Engineering, Alhikma College of Science & Technology, 2015-Present.
- **1987- Present:** Teaching the following topics with institutions other than the University of Khartoum
  - 50-Hours Course on “Construction Management for Practicing Engineers”, The Real Estate Development Company, Khartoum, March-October **1988**.
  - Center for Engineering and Technical Studies (CETS), teaching engineering economics & construction management topics, **1999 – Present**.
  - Project Management (4<sup>th</sup> Year Architecture) with College of Technological Sciences, Omdurman, 2003.
  - Many specialized training courses within Sudan and abroad on Construction Contracts & FIDIC Forms, Claims, Construction Disputes and Arbitration.
  - Many specialized training courses within Sudan on asset valuation mainly with Sudan University of Science and Technology (SUST) and Almanhal Cneter (Hikma College for Science and Technology).
  - Extensive training on Project Management, PMO creation within project-based organizations, Construction contracting, construction claims management and dispute resolution, FIDIC contracting.

- **1994:** Member of a Committee for the Review of Engineering Management & Engineering Economics Syllabii, University of Khartoum. Report was approved by the University Senate and implemented since 1995.
- **1997-Present:** Coordinator and part-time lecturer in Structural Engineering and Construction Management, Center for Engineering and Technical Consultancy Services (CENTECS), Khartoum.
- **1986-1989:** Member, Faculty of Engineering Examinations Committee, University of Khartoum, representing the Civil Engineering Department.
- **2001-2002:** Participated as a member of a specialized committee for the technical and economic evaluation of two towers in Khartoum North for Al-Zaiem Al-Azhari University to decide on the possibility of the towers being purchased by the university. One tower has already been bought housing the current headquarters of the University.
- **1999-Now:** External examiner for a number of MSc. and PhD. research submissions in the field of Construction Management, Project Management and Structural Engineering at the Sudan University of Science and Technology, Sudan Academy of Sciences, Omdurman Islamic University, University of Science and Technology.
- **2014-2015:** External Examiner for the final year civil engineering department of the University of Science and Technology.
- **2002:** External examiner and evaluator of the Bachelor of Science Program in Construction Engineering of the Sudan University of Science and Technology.

**(E) OTHER PROFESSIONAL CONTRIBUTIONS:**

- **1987:** Represented DAMAA Engineering Executions Company in an arbitration committee for a construction dispute.
- **1997-2000:** Member and General Secretary of the National Committee for the Preparation of the Conditions of Contract and Specifications for Engineering Works, Sudan. The committee was set-up by the four main engineering professional organizations in Sudan.
- **1997:** Head of a Committee for the Review of the Problems facing the contract & its implementation for the New White Nile Bridge, A mission conducted in response to the request of Dar-Consult on behalf of the Ministry of Engineering Affairs, Khartoum State. All report recommendations were implemented and work progressed up to the successful completion of the project and its opening on **30/6/1999**.
- **1989:** Member, Tender Evaluation Committee, “Consultancy Services for Primary Schools Reconstruction Projects (Khartoum Area and the Northern Region), Project Preparation Unit (P.P.U.), Ministry of Finance, Khartoum.
- **1990:** Member, Tender Evaluation Committee, “Preparation of an Urban Development plan and Action Programmes for the National Capital Area-Khartoum”, Ministry of Housing, Construction and Public Utilities Sudan.
- **1990:** Member, Tender Evaluation Committee, “Pre-qualification for the Design, Preparation of Tender Documents and Construction Supervision of the Peoples Armed Forces Hotel”, Military Works Directorate, Khartoum.
- **1990:** Member, Tender Evaluation Committee, “Tenders for Reconstruction of 50 No. Primary Schools”, Emergency Flood Reconstruction Programmes. (EFRP) – Education Sector, IDA Credit 2011 US, Ministry of Education-Project Implementation Unit.
- **1992/93:** Member, Evaluation Committee for the Architectural Competition to Design the Department of Archaeology and Heritage at Karima, Wadi Al-Neel University.
- **1990:** Member, Evaluation Committee for the Draft Final Appraisal Report, Ahfad University for Women-Omdurman (on the building aspects of the project), prepared by Group 5 Consulting Engineers and ETC Consultants (Netherlands) for the P.P.U. – Ministry of Finance, Khartoum; the project was financed by the EEC and provided for workshop and laboratory development.

- **1999:** Member, Board of Directors for the National Company of Aluminium and UPVC (Alwaseed Aluminium Factory), a leading company in the field of aluminium works for the construction industry. Elected in May **2000** as Chairman of the Board.
- **2000 - 2001:** Member, Steering Committee for the National Engineering Conference on Roads, held 5-8 November 2001 in Khartoum, Sudan. The conference was organized by the Sudan Engineering Society in collaboration with the Ministry of Roads and Bridges.
- **1999 – 2002:** Member of the Board of Directors, Center for Engineering and Technical Studies "CETS".
- **2000 –2003:** Member of the Board of Directors, Real Estate Development Co. Ltd.
- **2000:** Head of Tender Evaluation Committee for Kaja Bridge along the Western Salvation Highway near Ginaina.
- **2000:** Member of the Committee for the prequalification of contractors for the "New Villages for the Population Displaced by the Construction of Marrawi Dam. The duties of the same committee were extended up-to the evaluation of the tenders submitted.
- **2001:** Member of the committee for the preparation of the draft criteria for the classification of contractors, set-up by the Sudanese Union of Contractors.
- **2001-Now:** Member of the Council and Head of the Cultural Committee of the Sudan Engineering Society.
- **2002-Now:** Member of the Cultural Committee of the Sudanese Union of Contractors.
- **2003-Now:** Head of the Training Committee of the Sudanese Union of Contractors.
- **2002-2003:** Head of the three- member Arbitration Committee of the construction dispute between Gombaila Construction Company & Mr. Abdallah Ahmed Abdallah, Khartoum.
- **2004 - Now :**Member of the Regulatory Council for General Contractors working with Khartoum State in its construction & infrastructure projects.
- **2005 - 2009:** Member of the Council & Executive Committee of the Sudanese Union of Engineers.
- **2005 - 2009:** Member of the Federal Regulatory Council for Engineering Contractors representing the Sudanese Union of Engineers.
- **2001:** Participated in the Workshop on "Contracts and Contractual Claims", organized in Amman, Jordan, by the Arab Union of Engineers.
- **2015:** Member of the Sudan Engineering Council (2015-2019) and member of two of its sub-committees: The Training Sub-committee and the Professional Sub-committee.

#### **(9) AWARDS AND HONOURS:**

- Shell Scholarship for the Best Performance in the First Year Engineering, University of Khartoum, **1977**.
- Garstin Prize for the student who shows the best ability in Surveying, University of Khartoum, **1980**.
- Sudan Engineering Society Prize of the Best Final Year Project in the Department of Civil Engineering, University of Khartoum, **1980**.

#### **(10) PUBLICATIONS:**

- Mohamed, M.S., "Dynamics of Skeletal Structures", Partial fulfillment, M.Sc. Thesis, University of Leeds, UK, Dec. **1982**.
- Mohamed, M.S., Phillips, D.V., "Analysis of Reinforced Concrete Beams in Torsion", Proc. 2nd Inter. Confer. In Civil and Structural Engineering Computing, ICE, London, 2-3 Dec. **1985**.
- Mohamed, M.S., "A Finite Element and Experimental Study of Reinforced Concrete in Torsion", PhD. Thesis, Civil Engineering Dept., Glasgow University, UK, Sep., **1986**.
- Phillips, D.V., Mohamed, M.S., "Three-Dimensional Nonlinear Analysis of Reinforced Concrete with Application to Torsion", Proc. Inter. Confer. on Computational Plasticity, Models, Software and Applications, Barcelona, Spain, 6-10 April, **1987**.

- Mohamed, M.S., "Concrete L-Beams under Pure Torsion-Experimental Results", Research Report IR-86/1, Dept. of Civil Eng., Glasgow University UK, **1986**.
- Mohamed, M.S. "Engineering Disaster Awareness and Management in Sudan: A Case Study", National Seminar on Disaster Prevention and Management in Sudan, Khartoum, 17-19 March, **1990**, University of Khartoum and UNEDBAS.
- Mohamed, M.S., "Problems Facing The National Contractor", Albaladeya, Journal of the Commissionerate for Engineering Affairs, Khartoum, Vol. **1, Sep.- Oct. 1990**, in Arabic.
- Elfeel, O., M., A., Tameem, A., M., O., Sulieman, S. H., and Mohamed, M., S. "Indications on The Potential Uses of Pozolana in Sudan", Workshop on Pozolana Uses in The Construction Industry in Sudan, Khartoum, **21/September/1999**.
- Mohamed, M., S. and Hassan, S., S., "A New Look Towards Training at The Arab Consultancy Firms in The Third Millennium", 1st Arab Engineering and Consultancy Confr. Under The Current Universal Trends, Damascus, Syria, **24-26 September 2000**.
- Mohamed, M., S., and Ali, A., M., "Training of Technical Cadre For The Road Construction Industry in Sudan", First National Engineering Conference On Roads, Khartoum, **5-8 November 2001**.
- Elfeel, O., M., A., and Mohamed, M. S., "Infrastructure Road Projects. Financed Through the Private Sector", First National Engineering Conference on Roads, Khartoum, **5-8 November 2001**.
- M.S Mohamed et al, "Direct Design of Reinforced Concrete Beams Under Combined Bending, Shear and Torsion", Submitted for publication to the "Engineer", magazine of the Sudan Engineering Society **2005**.
- Three short papers delivered to the "Seminar on Construction Contracts, Claims and Arbitration" organized by Sudatel, Khartoum, **5/ July/2005**; the papers were entitled:
  - (1) Tender Preparation and Prequalification Procedures.
  - (2) Tender Evaluation and Principles of Contract Award.
  - (3) Variation Orders.
- A number of articles on regular basis for the "Sudanese Contractor," the magazine of the Sudanese Union of Contractors. The articles published so far addressed the following issues: (1) Variation Orders in Construction Contracts, (2) Engineering Ethics and (3) The Future Role of the Sudanese Engineering Organizations.
- Mohamed M.S., "The Potentials of the Construction Industry in Sudan after the Peace Agreement," delivered to the Inter Build Conference, Cairo, Egypt, **2004**.
- Mohamed M.S., "The Potentials of the Sudanese Construction Industry During Peace with Particular Emphasis on the Southern Part of Sudan, delivered to the Arab Contractors Union Workshop held in Khartoum, **2004**.
- Mohamed M.S., "Current Status of the Road Network in the Sudan and its Potential Role in the Peace Era," submitted to a Symposium planned to be held at Erkawit, east of Sudan, towards the end of **2005** (in Arabic).
- Mohamed M.S., "Potentials of Road Construction Industry in Sudan under the BOT System," submitted to the same Erkawit Symposium above.

## **(1 1) RESEARCH ACTIVITIES:**

Self conducted research plus supervision of final year under-graduate and post-graduate students in the following areas:

### **(11.1) Analysis and Design of Structures:**

- "A Finite Element Study of Deep Beams", A purely analytical investigation on the behaviour of simply supported deep beams using finite element methods. Final Year B. Sc. Research project, **1987/88**.
- "A Finite Element and Experimental Study on Deep Beams". Final Year B. Sc. Research project using the finite element method and some limited number of experiments on deep beams, **1998/89**.



- “Direct Design and Finite Element Study of Reinforced Concrete Subjected to Pure and Combined Torsion”. A project co-supervised by Dr. Ali Zaroug and Dr. Abdel Wahid Hago. M. Sc. Research project carried out by student Elhussein A. E. Elarabi, **1987-1989**.
- “Finite Element Analysis of Reinforced Concrete Slabs”, M. Sc. Research project carried out by student Abdel Razig Abdalla Dafalla **1988-1990**.
- A number of other final year civil engineering projects in this field.

**(11.2) Economics and Management of Construction:**

- “Breakdown of Cost for Reinforced Concrete Building in Khartoum Area”. A project co-supervised by Dr. Mohamed Elmustafa Awad of the Building and Road Research Institute, University of Khartoum, Final year B.Sc. project, **1987/88**.
- “Cost Analysis of Typical Reinforced Concrete Buildings in Khartoum Area”. Final year B.Sc. research project, **1988/89**.
- A Study of Some Aspects of the Construction Industry in Sudan”. A survey study of the construction industry in Sudan. Final year B.Sc. research project, **1987/88**.
- “Effects of Inflation & Economic Reforms on the Construction Industry During the Period **1992 – 2002** in Sudan”, a PhD research underway at the Sudan University of Science & Technology (SUST) by Ibrahim Ahmed Adam of the Civil Engineering Dept., University of Nayala.
- A number of other final year civil engineering projects in the fields of specialization.

**(12) SPECIAL INTERESTS:**

- Computer applications and software development for the analysis and design of structures.
- Application of micro and personal computers to the construction industry problems (economics, estimation, management).
- Reading in the history of Sudan.
- Interest and active contribution in the activities of the Sudanese organizing bodies for the engineering Profession.

**(13) REFEREES:**

- **Dr. Hassan Omer Abdelrehman**, Chairman, Sudan Engineering Council.
- **Dr. Mahgoub Osman Mahgoub**, Civil Engineering Dept. Faculty of Engineering and Architecture, University of Khartoum, P.O.Box 321, Khartoum, Sudan.
- **Dr. D.V. Phillips**, Civil Engineering Dept., University of Glasgow, Oakfield Ave., Glasgow G12 8LT, Scotland, UK.
- **Dr. Mohamed Elmustafa Awad**, Associate Professor, Department of Architecture, University of Khartoum, P.O. Box 321, Khartoum, Sudan **Dr. Hassan Omer Abdel Rahman**, General Manager, Sudan Currency Printing Press Khartoum, Sudan (Ex-General Manager of the Real Estate Development Company).
- **Dr. Ali Zaroug**, Civil Engineering Department, Faculty of Engineering and Architecture, University of Khartoum, P.O. Box 321, Khartoum, Sudan.
- **Dr. Mohamed A. Adam Khaddam**, Civil Engineering Dept., Faculty of Engineering and Architecture, University of Khartoum, P. O. Box 321, Khartoum, Sudan.
- **Professor Abu Bakr Abdel Wahab**, Chairman, Sudan Engineering Society, Dar-Almuhandis, Street No.7, Amarat, Khartoum. Tel: 83-560396/7.
- **Eng. Muneer Yousif Alhakeem**, Chairman, Sudanese Union of Engineers, Dar-Almuhandis, Street No.7 Amarat, Khartoum.