Analytic Number Theory, Complex Variable and Supercomputers – Appendix

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1. CRAY-FORTRAN source codes for numerically solving the Fourier coefficients (Phase I code) and generating the high-index Fourier coefficients (Phase II code).

2. Parallel machine FORTRAN source code using PVM message passing library with hostless programming mode for verifying the "Central Limit Theorem".

3. First 1500 Fourier coefficients found for the Ramanujan τ-function using the recursive formula.

4. First 1000 Fourier coefficients found for the Ramanujan τ-function using Section 5.

5. First 1000 Fourier coefficients found for modular form with group N=5.

6. Fourier coefficients of the modular forms solved with group N=5, N=7.

7. More graphics for the Central Limit Theorem project.

8. Some computer systems used for this thesis project.

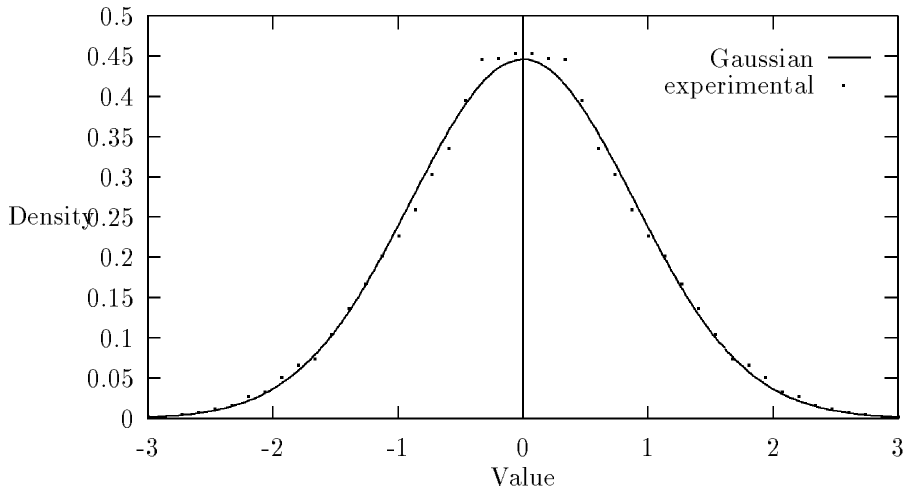

Figure 1: **Function 1, Q=10423507, NGRP=5**

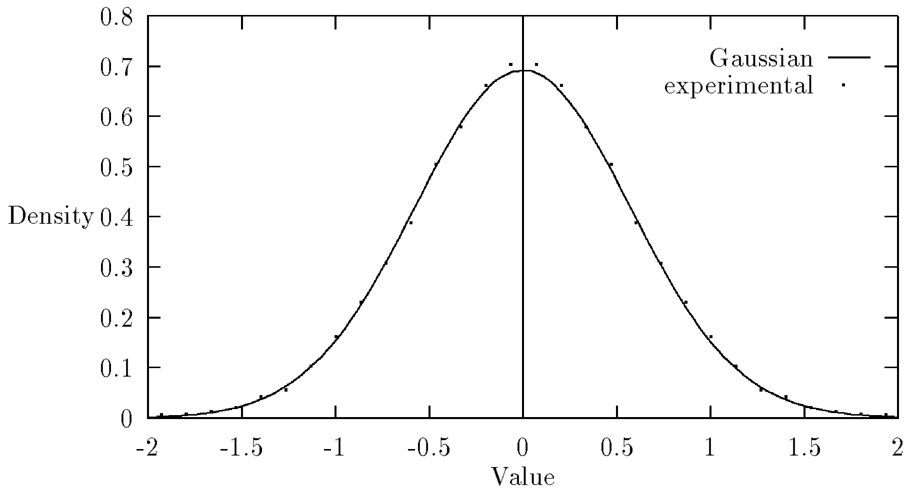

Figure 2: **Function 2, Q=10423507, NGRP=5**

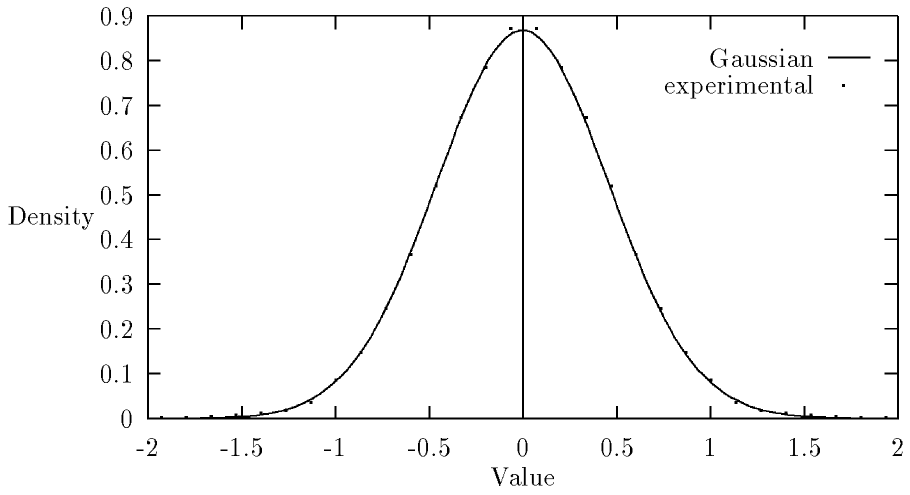

Figure 3: **Function 3, Q=10423507, NGRP=5**

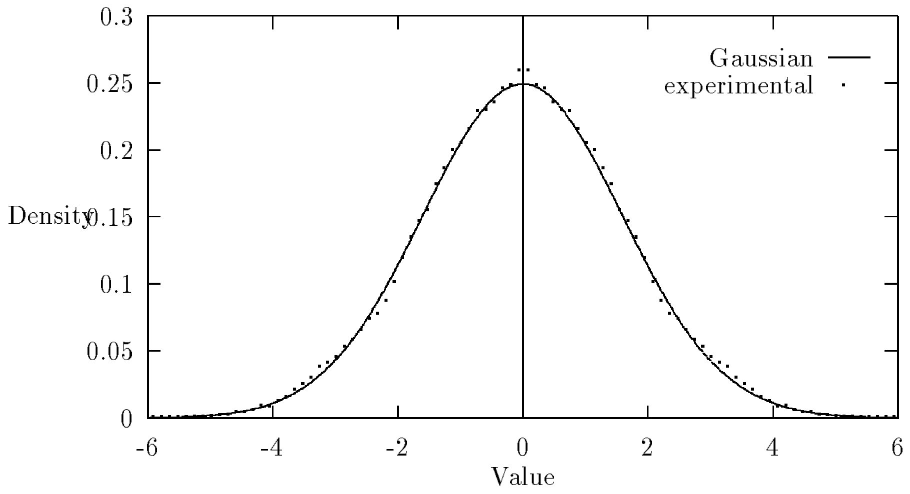

Figure 4: **Function 4, Q=10423507, NGRP=5**

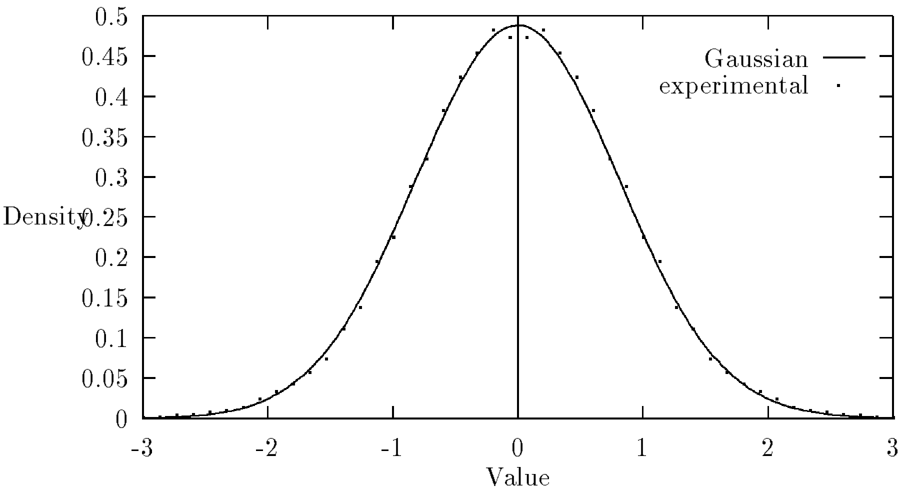

Figure 5: **Function 5, Q=10423507, NGRP=5**

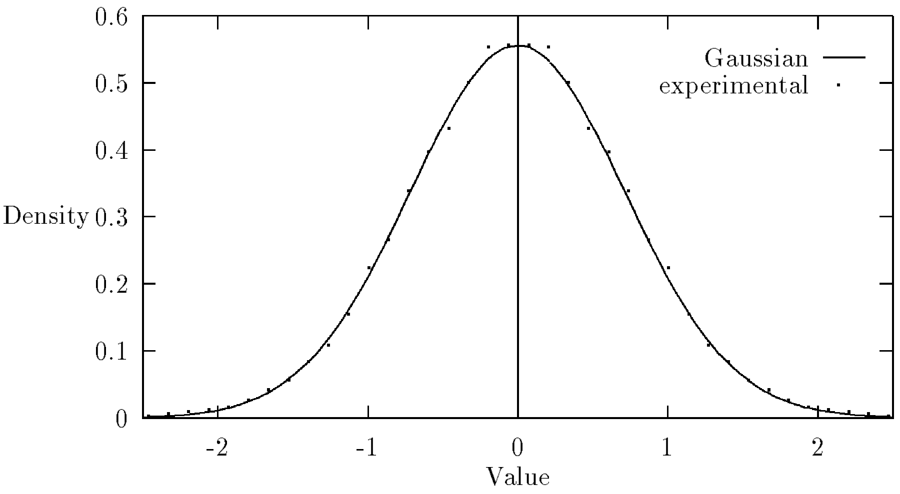

Figure 6: **Function 6, Q=10423507, NGRP=5**

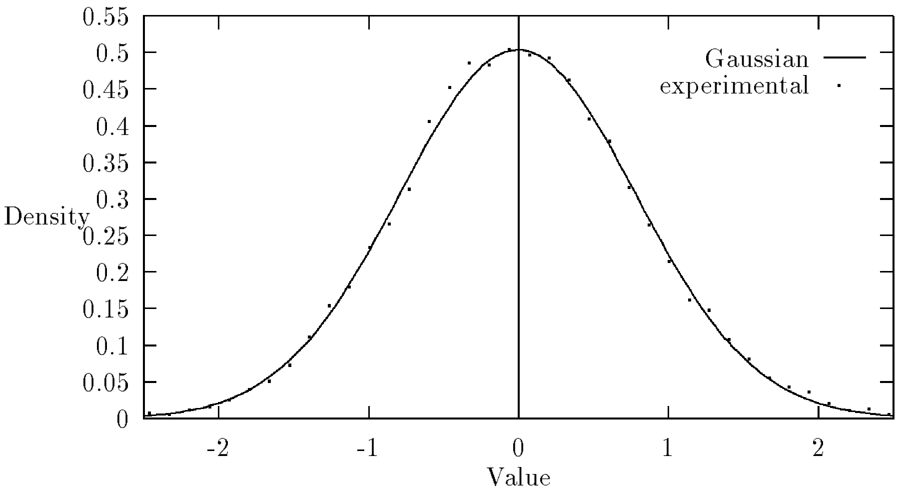

Figure 7: **Function 7, Q=10423507, NGRP=5**

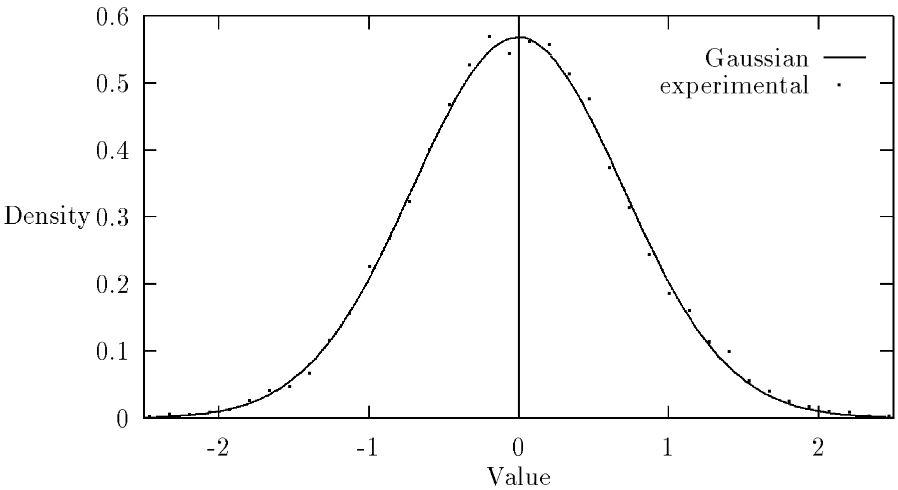

Figure 8: **Function 8, Q=10423507, NGRP=5**

Figure 9: **CRAY-T3D coupled with CRAY-C90 at Minnesota**

Figure 10: **Massive Parallel Machine CM-5**