

# A Bibliography of Publications of Nicholas John Higham

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## Abstract

This bibliography records publications of Nicholas John Higham.

**0** [Hig05a]. **0-471-11111-2** [Hig99a].  
**0-89871-561-X** [Hig05a].

**100-Digit** [Hig05a]. **17th** [HWG98]. **1986**  
[IP87]. **1992** [MGD93]. **1997** [HWG98].

**2017** [BBdD17]. **24th** [BBdD17].

**60th** [Hig92b]. **679** [DDHD90].

**'98** [ALM99].

**1** [CH01a, CH01b, HT00]. **2** [HR14b].  **$3 \times 3$**   
[HN16]. **\$57.00** [Hig05a].  **$T$**  [Hig99f].  **$a$**   
[CDHJ07].  **$A^\alpha$** ,  **$\log(A)$**  [HHT08].  
 **$AX - XB = C$**  [Hig92f, Hig93f, Hig93e].  
 **$C_n(x)$**  [Hig93b, Hig96b, Hig97a].  **$f$**  [DH05].  
 **$f(A)b$**  [DH05].  **$J$**  [Hig03a].  **$LU$**   
[DHS95, FH21b, HHP21, HM22b].  **$LDL^T$**   
[Hig97f].  **$p$**  [BHM05, GH06, Hig92a, HL11a].  
 **$QR$**  [CH97b, Hig90h, Hig91b, Hig98a, Hig00a,  
Hig03b].  **$S_n(x)$**  [Hig93b, Hig96b, Hig97a].  
 **$s \exp(s) = a$**  [CDHJ07].  **$W$**  [CDHJ07, FHI15].

**-Norm** [CH01a, CH01b, HT00, Hig92a].

**-Orthogonal** [Hig03a]. **-th** [HL11a].

**accelerate** [HBT+20]. **Accelerating**  
[CH18]. **acceleration** [HS16a]. **Accuracy**  
[CH97a, CH99c, Hig89a, Hig96a, Hig98e,  
Hig99d, Hig02a, Hig05a, CHKL01, Hig93a].  
**Accurate** [BHM20, Hig90f, Hig98a, CH17,  
Hig00a, Hig00b]. **Accurately** [BHH21].  
**Acta** [Hig96d]. **Action**  
[AMH11, HK17, Fis17]. **Adaptive**  
[ADF+19]. **Add** [BHL+19, BHL+20].  
**Advanced** [MGD93]. **Again** [HS98]. **Al**  
[Fis17]. **Al-Mohy** [Fis17]. **Alan** [Hig06a].

**Algebra**

[ACD<sup>+</sup>21, DDHD90, Hig85b, HS87, Hig94d, Hig94e, Hig95e, Hig97d, Hig97j, Hig98e, Hig99a, Hig99b, Hig00c, HHL01, Hog07, MGD93, HM20, HM22a, MP93, Hig99e].

**Algebraic** [Bro07, GH07]. **Algorithm**

[AMH10b, BHH93, CH96b, CH98a, CH01a, CH01b, DH03, GHT10, Hig88a, Hig91a, HP94a, HP94b, HT00, Hig03b, HL11b, HL21, AMH09b, BH10, FHI15, FH19, Fis17, GHT09b, HL13, HN16, DDHD90, Hig89c].

**Algorithms** [AMH12, AH16, BHM05, BHM20, DH16, DH90b, DH92a, Hig86b, Hig87b, Hig90k, Hig96a, Hig98e, Hig99d, Hig02a, Hig06b, NH13, AMHR15, BHP03a, DGH20, FH18a, HH05a, HM22a, Hig96f].

**Alley** [Hig01b]. **alternating** [HS16a].

**always** [CDHJ07]. **Analysis**

[ALM99, BHL<sup>+</sup>19, DHT01, Hig87b, Hig90a, Hig90k, HK93a, Hig97e, Hig98b, Hig99d, Hig06a, HM19a, IP87, THDC09, BBDH14, BHL<sup>+</sup>20, CH17, CHM21, DW97, Hig93e, HWG98, HK00, HM20, ALM99, Hig02d].

**Analyst** [Hig99c]. **analyzing** [GHT11].

**Anderson** [HS16a]. **Anonymous** [Hig92c].

**Anton** [Hig95e]. **Anymatrix** [HM22c].

**Appl.** [Hig93b, Hig97a].

**Application** [AMH09a, AMH11, BHL<sup>+</sup>19, HT00, HSŠ16, HPZ19, AMH08, AH14, BHL<sup>+</sup>20, CH17, GHP18]. **Applications**

[Hig86a, Hig88a, Hig89c, Hig89e, Hig90j, Hig95e, Hig07b, MP93, MGD93, TH02, HT02, TH01, Hig06b]. **Applied**

[GH04, Hig99a, Hig00c, Hig02e, HDG<sup>+</sup>15, MP93, Hig14]. **Applied/Computational** [GH04]. **Approach** [HM19a, AHTW01].

**approximants** [Hig01a]. **Approximating**

[CHKL01]. **approximation** [AMH10a].

**Approximations** [HM19b]. **April** [IP87].

**Arbitrary** [HS90, FH19]. **Arc**

[GHT10, GHT09b]. **Arising** [HC96, HC98].

**ARITH** [BBdD17]. **Arithmetic**

[BBdD17, Hig91d, HK95, Hig02e, Hig17, Hig18e, HP19, HTDH18, HP21]. **Arnold**

[Hig02d]. **Art** [IP87, DW97]. **associated**

[HTV02]. **asynchronous** [BBDH14].

**August** [Bro07, MGD93].

**Backward**

[CH98c, CH98d, CH99b, CH00, HH92a, Hig92f, HH96b, HH98, HH99, HLT07, HLT08, NH12, CHM21, Hig93f, Hig93e, HM20].

**Baker** [HF17]. **Baltimore** [Hig90i].

**Barnett** [Hig90j]. **barycentric** [Hig04].

**Based**

[CH96b, CH98a, AHH16, CHP20, SLEK19].

**Basic**

[ACD<sup>+</sup>21, DDHD90, HM20, Hig85a, Hig86c].

**Batched** [ACD<sup>+</sup>21]. **Behavior**

[HK93b, Hig07c]. **Belgium** [MGD93].

**bfloat16** [Hig18e]. **Biennial** [HWG98]. **Bini**

[Hig96f]. **Birkhäuser** [Hig96f].

**Birmingham** [IP87]. **Birthday** [Hig92b].

**Björck** [Hig87b]. **Björck-Pereyra** [Hig87b].

**BLAS** [DDP94, DH90b, DH92a, Hig90e].

**Block**

[BHL<sup>+</sup>19, CH01a, CH01b, DDP94, DH90b, DHS92, DH92a, DHS95, Hig97f, HT00, HSŠ16, ADF<sup>+</sup>19, BHL<sup>+</sup>20, Hig99f, HM22b].

**block-Jacobi** [ADF<sup>+</sup>19]. **Bohemian**

[Hig18b]. **Book**

[Hig98b, Hig99a, Hig99b, Hig05a]. **Books**

[Hig99b]. **Bornemann** [Hig05a]. **Bounding**

[Hig90b]. **Bounds**

[CH98c, DH90a, DH93, Hig90c, HT01, HT03, HS16b, CH99b, Hig83b]. **Bruaset** [Hig96e].

**Bur.** [Hig93b, Hig96b, Hig97a].

**C** [Hig90i, Hig90j, Hig93b, Hig96b, Hig97a, Hig00c]. **Cambridge** [Hig96d, Hig02d].

**Canada** [Bro07]. **Canonical**

[HMT10, HMT10]. **Cayley** [Hig08a].

**Celebrating** [HH19]. **centrality** [AHH16].

**CERFACS** [HHK93]. **chains** [MP93].

**Challenge** [Hig05a]. **Chebyshev**

[Hig93b, Hig96b, Hig97a]. **Cholesky**

[CH96b, CH98a, DHT01, Hig90a]. **Chris**

[Hig95e]. **Christoph** [Hig98b]. **Christopher**

[HF17]. **Chu** [Hig06b]. **Class** [BHM20]. **Cleve** [Hig99c]. **closest** [AHTW01]. **Codes** [Hig88a, Hig89c]. **Collection** [Hig89b, Hig91a, BHM<sup>+</sup>13, HM22c]. **Commentaries** [CGO07]. **Commentary** [Hig07b, Hig93b, Hig96b, Hig97a]. **Companion** [HDG<sup>+</sup>15]. **Complete** [Hig98a, Hig00a, Hig00b]. **completion** [GHP18]. **Complex** [Hig88a, Hig89c, Hig92e, Hig96c, AMH10a, Hig98c]. **Componentwise** [HH92b, HK93a, Hig94d, Hig94e]. **Computation** [Bro07, CGO07, Hig98b, Hig98a, Hig02c, Hig08b, Hig15, Hig00a, Hig00b]. **Computational** [GH04, DGH20]. **Computations** [HHK93, Hig85a, Hig86c, Hig89d, Hig90i, Hig93d, Hig96f]. **compute** [HN16]. **Computer** [BBdD17]. **Computers** [Hig00c]. **Computing** [AMH08, AMH09a, AMH11, AMHR13, BHR10, BH95, BH96, DH03, DH05, HHT08, Hig86a, Hig86b, Hig87a, HS87, Hig88b, Hig90c, HP94a, HP94b, Hig02b, Hig02e, HS03, HMMT04, Hig05a, HAM10, HK17, HL21, NH18, NH12, THDC09, AMHR15, AH14, BHH21, FH18a, Fis17, HS16a]. **Computing/Numerical** [THDC09]. **Condition** [AMH09a, FH21b, Hig83a, Hig86b, Hig87c, Hig88a, Hig89c, HH92a, HH96b, HH98, HH99, HR14b, AMH08, AMHR13, FH21a, Hig83b, HR14a]. **conditioned** [CH17]. **Conditioning** [HMT06]. **Conference** [HWG98, HHL01, IP87]. **Confluent** [Hig90k]. **Connection** [BHH93]. **Conquer** [NH13]. **Constrained** [CH97a, CH98c, CH98d, CH99c, CH00, BHP03a, CH99b]. **Continuation** [BH95, BH96]. **contour** [HHT08]. **control** [HT02]. **Cores** [BHL<sup>+</sup>19, BHL<sup>+</sup>20, HTDH18, HBT<sup>+</sup>20]. **Correlation** [BHR10, DH00, HS16b, HSS16, AHTW01, BH10, GHP18, Hig02b, HS16a]. **Corrigendum** [Hig89c]. **Cosine** [HS03, AMHR15, HH05a]. **Course** [HL15]. **Covariance** [LHP14]. **Craft** [Hig01b]. **D** [Hig99a, Hig99e]. **Danny** [Hig00c]. **Dario** [Hig96f]. **data** [Hig18d, HM20]. **Decomposition** [Hig86a, Hig90a, HS90, HP93, Hig94c, HP94a, HP94b, HMMT04, HMT10, NH12, NH13, HMT10, HN16]. **Definite** [CH98b, DHT01, GHT10, Hig96c, HMT09, CH99a, GHT09b, Hig90a, Hig98c, HTV02, HP21]. **Definiteness** [HSS16]. **Dense** [Hig97d]. **Derivative** [AMH09a, HL21, AMH08, AMH10a, AMHR13, HR14a]. **Derivative-Free** [HL21]. **Derivatives** [HR14b, HL13]. **Detecting** [GHT08, GHT09a, GHT10, HTV02, GHT09b]. **Developing** [THDC09]. **Developments** [Hig97d]. **Diagonal** [Hig95c, Hig95b, Hig97g]. **Dictionary** [Hig94f]. **difference** [Hig18a]. **Differentiation** [Hig18a]. **Digit** [Hig05a]. **Direct** [Hig93d]. **Dirk** [Hig05a]. **Distance** [HS16b]. **Distributed** [SLEK19]. **Distributed-memory** [SLEK19]. **Divide** [NH13]. **Dongarra** [Hig00c]. **Duff** [Hig00c]. **Dundee** [HWG98]. **early** [Hig08a]. **Editing** [Hig01b]. **Edition** [Hig90i, Hig95e]. **eds** [Hig90j]. **Efficient** [HH05a, Hig86b, NH13]. **Eigenproblem** [DHT01]. **Eigenproblems** [HLT08, GHT11, HLT07]. **Eigenvalue** [CH98b, GHT09a, HH96b, HH98, HH99, Hig06b, NH13, TH02, BHM<sup>+</sup>13, CH99a, GHT08, HTV02, HT02, HMTG08, TH01]. **Eigenvalues** [HT01, HT03]. **Eighth** [HHL01]. **Elementary** [Hig95e]. **Elements** [HR16]. **Elimination** [CH98d, CH00, HH89, Hig90b, Hig90f]. **elliptic** [HTV02]. **Embree** [Hig07c]. **Engineers** [Hig01b, Hig06a]. **Enhances** [Hig90h, Hig91b]. **entropy** [LHP14]. **EPSRC** [ALM99]. **Equality** [CH97a, CH98d, CH99c, CH00, BHP03a]. **Equation** [GH07, HK02, HK00, HK01].

**Equations** [Hig90h, Hig91b, Hig91c]. **Error** [BHL<sup>+</sup>19, CH98c, DH90a, DH93, Hig87b, Hig90b, Hig90c, HH92a, Hig92f, HK93a, HH96b, HH98, HH99, HLT08, HM19a, HM19b, BHL<sup>+</sup>20, CHM21, CH99b, Fis17, Hig93f, Hig93e, HLT07, HM20]. **errors** [DH13]. **Essex** [Hig96e]. **Estimating** [Hig88a, Hig89c, Hig92a, HR14a, HR16, AMHR13]. **Estimation** [AMH09a, CH01a, CH01b, Hig87c, Hig88a, Hig89c, HT00, AMH08, Fis17]. **Estimator** [Hig90d]. **Evaluating** [Hig01a]. **Ever** [HS98]. **Exact** [HK02, HK01]. **Exercises** [Hig02e]. **exp** [BHH21]. **Experience** [Hig90d]. **Explicit** [GHP18]. **Exploiting** [Hig90e, HP21]. **Exploits** [HM19b]. **Exponential** [AMH09a, AMH10b, AMH11, Hig05d, Hig09, AMH08, AMH09b, AH14, AHH16, FH19, Fis17]. **exponential-based** [AHH16]. **extensible** [HM22c]. **extreme** [FH21a]. **extreme-scale** [FH21a].

**F** [Hig90i]. **Fête** [Hig92b]. **Factor** [BHR10]. **factorisations** [HLS21]. **Factorization** [BHP03b, CH96b, CH98a, CH97b, CH98e, DHS92, DHS95, FH21b, Hig90h, Hig91b, Hig97f, Hig98a, HM19b, HHP21, Hig99f, Hig00a, Hig00b, HM22b]. **Factorizations** [Hig07b]. **Factorizing** [Hig96c, Hig98c]. **Factors** [DH00, HH89]. **Fast** [BHM20, DH90b, DH92a, Hig88c, Hig90e, Hig90g, HS90, HTDH18]. **Featured** [Hig99b]. **Field** [BH95, BH96]. **FIMA** [FH18b]. **finance** [Hig02b]. **Finite** [HK93b, HK95]. **Fitting** [Hig99c]. **Fixed** [HSŠ16]. **Floating** [Hig91d, Hig02e, HP19, Hig93a]. **Floating-Point** [HP19]. **focus** [Hig18d]. **Folkmar** [Hig05a]. **form** [HLS21]. **FORTRAN** [Hig88a, Hig89c]. **fp16** [Hig18e, HTDH18]. **Fractional** [HL11b, HL13]. **Framework** [SLEK19, GHT11]. **Fréchet** [AMH08, AMH09a, AMH10a, AMHR13, HL13, HR14a, HR14b]. **Free** [HL21]. **FTP** [Hig92c]. **Function** [DH16, Hig08e, AMH10a, AH14, CDHJ07, FHI15, HR14a, LHP14]. **Functions** [AH16, DH03, HMMT05, Hig07a, Hig08b, HR14b, HL15, HK17, HL21, NH18, BHH21, DH05, HHT08, HAM10]. **Fundamental** [Hig96f]. **Fused** [BHL<sup>+</sup>19, BHL<sup>+</sup>20].

**G** [Hig90i]. **Gaussian** [HH89, Hig90b, Hig90f]. **Gene** [Hig06b, CGO07, Hig08c, Hig08d]. **Generalized** [CH98b, DHT01, HH96b, HH98, HH99, HMT10, CH99a, HMT10]. **Generating** [FH21a, HHP21]. **Generation** [DH00, Hig03a]. **given** [MP93]. **Gives** [Hig16a]. **GMRES** [CHP20]. **GMRES-based** [CHP20]. **Golub** [Hig90i, Hig06b, CGO07, Hig92b, Hig08c, Hig08d]. **Gover** [Hig90j]. **GPU** [BHL<sup>+</sup>19, BHL<sup>+</sup>20, HTDH18]. **GPUs** [HBT<sup>+</sup>20]. **Graduate** [ALM99]. **Greet** [GH04]. **Groups** [HMMT04, HMMT05]. **Growth** [HH89, HHP21]. **Guide** [ALM99, HH00, Hig01b, HH05b, HH17].

**H** [CGO07, Hig90i, Hig06b, HF17]. **Half** [Hig18e, HPZ19]. **Hand** [HH92b]. **Handbook** [Hig93c, Hig94b, Hig98d, Hig20, Hog07]. **hardcover** [Hig05a]. **Hardy** [HH19]. **Harnessing** [HTDH18]. **held** [IP87, MP93]. **Henk** [Hig00c]. **Hermitian** [CH98b, CH99a, GHT09b, GHT10, HTV02]. **High** [Hig00c, Hig05a, THDC09, DGH20]. **High-Accuracy** [Hig05a]. **High-Performance** [Hig00c, THDC09, DGH20]. **Higham** [Fis17]. **Higher** [HR14b]. **Historical** [Hig16b]. **Hopkins** [Hig90i]. **Hosts** [HHK93, Hig97c]. **Householder** [CH97b, CH98e]. **Howard** [Hig95e]. **Hundred** [Hig02e]. **Hyperbolic** [AH16, BHP03b, GHT09a, HK17, GHT08, HTV02].

**Iain** [Hig00c]. **Identities** [DH16]. **IEEE** [BBdD17, Hig02e]. **ill** [CH17]. **ill-conditioned** [CH17]. **IMA** [IP87, Hig92b]. **IMA/SIAM** [IP87]. **Imaginary** [Hig96c, Hig98c]. **Implementation** [CH01a, CH01b, DDP94, DDHD90]. **implemented** [BBDH14]. **Improved** [AMH12, DH90a, DH93, GHT10, GHT09b, HL13]. **Inaugural** [Hig97c]. **Including** [Hig02e]. **Indefinite** [BHP03b, CH96b, CH98a, BHP03a]. **Industrial** [Hig00c, Hig02e]. **Inertia** [HC96, HC98]. **Infinity** [FH21b]. **Infinity-Norm** [FH21b]. **influence** [DH13, Hig14]. **Institute** [MP93, MGD93]. **insurance** [GHP18]. **Integer** [HLS21]. **integrals** [HHT08]. **Integrators** [AMH11]. **International** [Bro07, HHL01]. **interpolation** [Hig04]. **Interview** [Hig05b, Hig05c, Hig08c, Hig08d]. **Introduction** [Hig93b, Hig96b, Hig97a, Hig02d]. **Inverse** [AMH12, AH16, GH06, HP94c, Hig06b]. **Inversion** [BHH93, DH90c, DH92b]. **Involving** [Hig88c]. **Irish** [Hig97c]. **ISBN** [Hig99a, Hig05a]. **Iteration** [HK93b]. **Iterations** [Hig97h, HMMT05, NH12, Hig97i]. **Iterative** [CH18, DHT01, GH07, Hig90h, Hig91b, HK93a, Hig95d, Hig95a, Hig96e, Hig97b, ADF<sup>+</sup>19, CH17, CHP20, HTDH18, HBT<sup>+</sup>20].

**J** [Hig90j, Hig00c, Hig06a]. **Jack** [Hig00c]. **Jacobi** [ADF<sup>+</sup>19, BBDH14]. **James** [Hig97e, HH19]. **January** [MP93]. **Joan** [FH18b]. **John** [Hig99a]. **Johns** [Hig90i]. **Joint** [IP87]. **Jörg** [Hig05a]. **Joy** [Hig92c]. **July** [Bro07, BBdD17]. **June** [HWG98].

**Kernel** [NH18]. **kernels** [HM20]. **Knuth** [Hig16a].

**Lagrange** [Hig04]. **Lambert** [CDHJ07, FHI15]. **Lancaster** [Hig05b, Hig05c]. **Lanczos** [Hig93b, Hig96b, Hig97a, BH95, BH96]. **LAPACK** [ACD<sup>+</sup>21, CH01a, Hig92d, Hig95d, Hig95a, Hig97b]. **Large** [HH89, HHP21, MGD93]. **Largest** [HR16]. **Laub** [Hig06a]. **Laurie** [Hig05a]. **Lax** [Hig99a, Hig99e]. **LDL** [Hig99f]. **Least** [BHP03b, CH97a, CH97b, CH98c, CH98d, CH98e, CH99c, CH00, BHP03a, CHP20, CH99b, HP21]. **Lecture** [ALM99, Hig16a]. **lectures** [MP93]. **Leuven** [MGD93]. **Level** [DDP94, DH90b, DH92a, Hig90e, HR14b, DDHD90]. **Level-** [HR14b]. **Level-3** [DDP94, DH92a]. **like** [Hig88c, Hig90k]. **Line** [HK02, HK01]. **Linear** [ACD<sup>+</sup>21, CH18, DDHD90, Hig85b, HS87, Hig90h, Hig91b, Hig91c, HH92a, HH92b, Hig94d, Hig94e, Hig95d, Hig95e, Hig97d, Hig97j, Hig98e, Hig99a, Hig99b, Hig00c, HHL01, HPZ19, Hog07, MP93, ADF<sup>+</sup>19, CH17, GHT11, HBT<sup>+</sup>20, Hig97b, HM20, HP21, HM22a, HM22b, Hig99e, MP93, MGD93]. **Linearization** [HLT08, HMT09, HLT07]. **Linearizations** [HMT06, HMMT07b, HMMT07a]. **Lloyd** [Hig07c]. **Loan** [Hig90i]. **log** [BHH21]. **log-sum-exp** [BHH21]. **Logarithm** [AMH12, AMHR13, CHKLO1, FH18a, Hig01a]. **London** [BBdD17]. **Longman** [Hig96e]. **loss** [LHP14]. **Low** [HM19b, HP19, HM22b]. **Low-Rank** [HM19b, HM22b]. **lower** [HP21]. **LU** [DHS92].

**M** [Hig90j]. **Machine** [BHH93]. **Magnus** [Hig96e]. **management** [GHP18]. **Managers** [Hig01b]. **Manchester** [GH04, Hig97c]. **Manycore** [SLEK19]. **March** [Hig92d]. **Mark** [Hig07c]. **Markov** [MP93]. **Maryland** [Hig90i]. **Matching** [AHH16]. **Math.** [Hig93b, Hig96b, Hig97a]. **Mathematical** [Hig93c, Hig94b, Hig94f, Hig98d, Hig16b, Hig20]. **Mathematicians**

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