A Bibliography of Publications of Pieter W. Hemker

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Abstract

This bibliography records publications of Pieter W. Hemker.

Title word cross-reference

2 [Hem82a, HM91]. 3 [Hem95a, Hem95b, Hem96a, HdZ97, Hem97, KH97]. D [KH92b]. ϵ [HSS97a, HSS99a, HSS00]. H [HHA09]. hp [HL08]. n [TH94].

-adaptive [HL08]. **-component** [TH94]. **-D** [Hem82a]. **-Dimensional** [HdZ97]. **-transform** [HHA09]. **-Uniform** [HSS97a, HSS99a, HSS00].

2D [MH90].

3-Dimensional [Hd93a, Hd93b]. **3D** [Hem92, HKN97, HKN98, KHE97, NH97, NH98].

4 [Hem96a].

65 [HOS03].

8th [WHO08].

96c [Hem96a].

aan [Hem90a, Hem96b]. **aanvaarding** [Hem90a]. **Acceleration** [DHH+91, HSS01b]. **Accuracy** [HSS97a, Hem87, HSS99b, HSS00, HSS02b, KSS04]. **accurate** [Hem82a, Hem82d, HSS01b, HSS01a, HSS02a, HSS02c, HSS03a, HSS03b, KH91c]. **activity** [HEH+67, HH09, HH13]. **actuator** [ELE+06]. **acute** [DHH+02]. **adapted** [HP93]. **Adaptive** [DHH+91, HS94b, HKL+97b, Hem00, VH95, Hem80d, HvdME90, HM91, HS01, HL08, vdMHE90, NH00, SSH04, VKH06, vdMHKM93]. **Adv.** [Hem96a]. **affinity** [RTH+11]. **ALGOL** [CHvS72, Hem71a, Hem73a, Hem77a, HW79,

Hem81c]. **algorithm** [Hem80d]. **Algorithms** [Hem84c, DH90a, DH90b, Hem80b, Hem82f, Hem84b]. **ambt** [Hem90a]. **Amsterdam** [Hem90a]. **Analysis** [DH90a, DH90b, DH95, HM79, Hem80a, HHvR03b, HvR04, HHvR04, vRH05]. **antibody** [RTH+11]. **antibody-antigen** [RTH+11]. **antigen** [RTH+11]. **Application** [HHH00, Hem00, NH00, vdMHKM93]. **applied** [ELE+06, dH79]. **approach** [BHS84, Hem88a, HM91, HHvR03b, MH90]. **approaches** [HJ87, NH97, NH98]. **Approximate** [TH94, Hem82e]. **Approximation** [HS92, HS93, HS94a, HP96, HP97, TH91]. **Approximations** [FHS95, FHS96a, FHS96b, FHS96c]. **Arising** [HSS97b]. **Aspects** [HHL65, HH68, HSd80, Hem83b]. **assay** [HHv+71]. **assessment** [RTH+11]. **autonomous** [HWD84].

bases [HP93]. **Basic** [HHL65]. **BASIS** [HvdME90]. **BASIS3** [Hd93a, Hd93b, HdZ97]. **begin** [CHvS72]. **begin-** [CHvS72]. **behaviour** [HD93c]. **bias** [Hem82a]. **bibliography** [Hem80c]. **bij** [Hem90a]. **Bijzonder** [Hem90a]. **binding** [RTH+11]. **bioassay** [RTH+11]. **biological** [HdH06]. **Blood** [HHL65, HH68, HdH06]. **bouds** [dH79]. **Boundary** [FHS95, FHS96a, Hem77b, HS94b, FHST95, FHS96b, FHS96c, dH79, Hem74a, HSd80, HSS02c, HHvR03a, HSS03a]. **boundary-value** [dH79, HSd80].

C1 [DHH+02]. **C1-inhibitor** [DHH+02]. **calibration** [HHA09]. **cascades** [HH69]. **cases** [HP93]. **CFD** [HK97, KH97, KHE97]. **chemical** [HDH05]. **circle** [Hem74b]. **Class** [HS94b, HST02, SSH04]. **Clotting** [HHL65, HH68, WHH06]. **coagulation** [HDH05, HdH06]. **Coarsened** [KHE97]. **Coarsening** [KHd97]. **code** [HWD84, vdMHE90]. **codes** [HSd80]. **Colloquium** [BHPv76, BDHv75, DHv72]. **Comparing** [HSd80]. **comparison** [Hem82f, RTH+11]. **competitive** [HH68]. **component** [TH91, TH94]. **composed** [HST02]. **Compressible** [VH95, DHK93]. **Comput** [Hem96a]. **Computation** [Hem86a, HHv+73, Hem96c, KH91b, KH92a]. **computational** [DHKL94]. **Computations** [KHd97, HvdME90, HSS01b, KdH88, KH91a, KH91c, KH92b, KvBH+03]. **concentrated** [SSH97]. **concentrations** [HHA09]. **Condition** [HS92, HS93, HS94a]. **conditions** [FHST95, HSS02c, HHvR03a, HSS03a]. **Conference** [WHO08]. **constants** [RTH+11]. **Continuation** [PWBH81]. **Contributions** [HW94a]. **control** [HDH05]. **Convection** [HSS97b, Hem82d, HSS99a, HSS01b, HSS01a, HSS02a, HSS02c, HSS02b, HST02, HSS03a, HSS03b, SSH04, VKH06, vRH05]. **Convection-Diffusion** [HSS97b, HSS99a, HSS01b, HSS02a, HSS02c, HST02, HSS03a, HSS03b, SSH04, VKH06, vRH05]. **Convergence** [DH95, HD93c, NH97, NH98, DH90a, DH90b]. **converting** [HEH+67]. **corrected** [HH09, HH13]. **Correction** [Hem82b, BHS84, DH90a, DH90b, DH95, EH05, ELH08a, ELH08b, Hem82c, Hem82d, Hem82e, HD83, Hem83c, Hem84a, Hem86b, HK88a, HK88b, HK88c, HD93c, HK94, HK95a, HK95b, HS95, HSS97c, HSS98, HSS99a, HSS02a, HSS03b, KH91c]. **Corrigendum** [Hem96a]. **course** [HH09, HH13]. **Criteria** [Hem77a]. **cubature** [Hem73b]. **curved** [HL08].

D [Hem96a, Hem82a, HM91, Hem95a, Hem95b, Hem97, KH97]. **D-problems** [Hem96a, Hem95b, Hem97]. **Damped** [KH91a]. **Data** [Hd93a, Hd93b, HdZ97, HvdME90, SSH97].

decomposition [FHST95, Hem80b, KSS04]. **Decoupled** [DHH+91]. **deel** [BDHv75, DHv72]. **Defect** [Hem82b, HD83, Hem86b, HK88a, HK88b, HK94, HK95a, HK95b, HSS02a, BHS84, DH90a, DH90b, DH95, EH05, ELH08a, ELH08b, Hem82c, Hem82d, Hem82e, Hem83c, Hem84a, HK88c, HD93c, HS95, HSS97c, HSS98, HSS99a, KH91c]. **defect-correction** [DH90a, DH90b, DH95, HSS99a]. **deficient** [Hem82e]. **dependent** [KH91a]. **Derivation** [HHL65]. **derivative** [Hem83a, Hem84d]. **design** [ELE+06]. **development** [HKWdZ83]. **device** [Hem88a, Hem88b, Hem90b]. **devoted** [WHO08]. **difference** [HSS01b, HS01]. **differences** [Hem74a]. **differentiaalvergelijkingen** [BDHv75, DHv72]. **differential** [Hem71a, Hem72a, Hem72b]. **Diffusion** [HSS97b, Hem82d, HSS99a, HSS01b, HSS02a, HSS02c, HST02, HSS03a, HSS03b, KSS04, SSH04, VKH06, vRH05]. **diffusional** [HDH05]. **Dimensional** [Hd93a, Hd93b, HdZ97, Hem88a, Hem88b, Hem90b, HK91, HvR04, KdH88, KH91c]. **Dimensions** [KHd97]. **diode** [Hem90b]. **direct** [HSS03b]. **direct-correction** [HSS03b]. **direction** [KH91a]. **directional** [Hem82a]. **Directions** [KHd97]. **Discontinuous** [HS92, HS93, HS94a, HHvR03a, HHvR03b, HvR04, HHvR04, vRH05]. **Discrete** [FHS95, FHS96a, FHS96b, FHS96c, HS92, HS94a, HSS97b]. **discretisation** [HvR04]. **Discretiseringsmethoden** [BHPv76]. **discretization** [HHvR03a, HHvR03b, HHvR04]. **discretized** [vRH05]. **distribution** [FHST95]. **disturbance** [SSH97]. **disturbances** [HH09, HH13]. **domain** [FHST95, Hem74b, HST02]. **double** [HHv+73]. **double-length** [HHv+73]. **During** [HDH05]. **dyadic** [HS01]. **dynamical** [EHS95]. **Dynamics** [HKL+95, HKL+97a, HKL+97b, DHKL94].

Editorial [WHO08]. **Efficient** [HK91, KH91b, KH92a, HS86, HKS86, KH91c]. **elementary** [HHv+73]. **elements** [Hem73c, HHvR04]. **ellipsometry** [RTH+11]. **elliptic** [Hem73c, Hem82a, Hem95a, KSS04]. **embedded** [HHvR03a]. **EMG** [WHO08]. **enzymatic** [HH09, HH13]. **enzyme** [HH69, HH09, HH13]. **Enzymes** [HHL65, HH68]. **equation** [Hem73c, Hem82d, HL08, KSS04, vRH05]. **equations** [DHK93, Hem71a, Hem72a, Hem72b, HS81, HS84, HS85a, HS85b, Hem86b, HS86, HKS86, HJ87, Hem87, HK88a, HK88b, HK88c, HK89, HM91, HK91, HD93c, HK94, HK95a, HK95b, HSS99b, HST02, MH90, vdMHKM93]. **ERCIM** [DHKL94]. **Error** [dH79]. **errors** [KvBH+03]. **estimation** [vH75, Hem72a, Hem72b]. **EULER** [vdMHE90, HS84, HS85a, HS85b, Hem86a, Hem86b, HS86, HKS86, HJ87, Hem87, HK88a, HK88b, HK89, HK91, HK94, HK95a, HK95b, KH91c, KH92b, KHd97, vdMHKM93]. **Euler-Flow** [KHd97]. **European** [WHO08]. **evaluation** [HHv+71]. **exact** [HL08]. **exchange** [TH91, TH94]. **exponentially** [dH79]. **Extensions** [Hem82c]. **exterior** [Hem74b]. **external** [HHA09].

fast [HKWdZ83]. **Finite** [Hem97, VH95, Hem73c, Hem94, Hem95b, Hem96a, HS01]. **Finite-Volume** [VH95, Hem94, Hem95b, Hem96a]. **fitted** [dH79]. **Fix** [KvBH+03]. **floating** [SSH97]. **Flow** [KHd97, Hem86a, KdH88, KH91a, KH91c, KH92b, KvBH+03]. **Flows** [VH95, DHK93, KH91b, KH92a]. **fluid** [DHKL94, KvBH+03]. **fluorescent**

[HHA09]. **Formation** [HEH+67]. **Formulas** [HHL65]. **Fourier** [Hem80a, HHvR03b, HvR04, HHvR04]. **Fouten** [Hem90a]. **Fredholm** [HS81]. **free** [RTH+11]. **functions** [HHv+73, HS01].

Galerkin [dH79, Hem75, HHvR03a, HHvR03b, HvR04, HHvR04, vRH05]. **Gas** [HKL+95, HKL+97a, HKL+97b, Hem86a]. **Gauss** [Hem82f, KdH88]. **General** [HH69]. **generation** [HDH05, HHA09, HHH72]. **Godunov** [KH97]. **Godunov-type** [KH97]. **Grid** [DHH+91, Hem00, HHH00, Hem80b, Hem80c, Hem81b, HS81, Hem86b, HS86, HKS86, Hem94, Hem95b, NH97, NH98, NH00, Hem96a]. **gridfunctions** [Hem80a]. **Grids** [Hd93a, Hd93b, HdZ97, HKN97, KH97, HP96, HP97, HKN98, HS01].

High [HSS97a, HSS01a, HSS02c, HSS02b, HSS03a, KSS04, HSS99b, HSS00, HSS01b, HSS02a, HSS03b, RTH+11]. **high-affinity** [RTH+11]. **High-Order** [HSS97a, HSS01a, HSS02c, HSS02b, HSS03a, KSS04, HSS99b, HSS00, HSS01b, HSS02a, HSS03b]. **higher** [Hem86b, HvR04]. **highest** [Hem83a, Hem84d]. **homogeneous** [HHH72]. **hoogleraar** [Hem90a]. **hyperbolic** [DH90a, DH90b, DH95, HD93c]. **hypersonic** [KH91a, KH91b, KH92a].

Identification [HK93, EHS95]. **II** [FHS96b]. **III** [FHS96c]. **ILU** [Hem82f]. **impacts** [HH09, HH13]. **implementations** [HdZ85]. **implicit** [DH90a, DH90b]. **improved** [Hem87]. **incomplete** [Hem80b]. **Index** [Hem73a]. **Industriële** [Hem90a]. **infarction** [DHH+02]. **inhibition** [HH68]. **inhibitor** [DHH+02]. **inhomogeneous** [HP93, HHH72]. **Initial** [HS92, HS93, HS94a, vH75, FHST95, SSH97]. **integral** [HS81]. **Interaction** [HHL65, HH68]. **interfaces** [KvBH+03]. **interior** [SSH04]. **Introduction** [Hem81a]. **inverse** [Hem82e]. **ion** [TH91, TH94]. **ion-exchange** [TH91, TH94]. **issue** [WHO08]. **iteration** [DH95, Hem82d, Hem84a]. **iterative** [DH90a, DH90b]. **IV** [HH68, HW94b].

John [HOS03].

kernel [HL08]. **kind** [HS81]. **Kinetic** [HHL65, HH68]. **Kinetics** [HK93, HH69, HH68]. **KWIC** [Hem73a].

Label [RTH+11]. **Label-free** [RTH+11]. **layer** [SSH04]. **Layers** [FHS95, FHS96a, FHS96b, FHS96c, Hem86a]. **Lecture** [Hem81b]. **length** [HHv+73]. **level** [EH08, Hem80d, HHvR03b, HvR04, HHvR04, vRH05]. **libraries** [Hem77a]. **library** [Hem73a]. **limits** [WHH06]. **Line** [KdH88, Hem82f]. **Line-Gauss** [Hem82f]. **Lineaire** [Hem71b]. **linear** [ELE+06, HdZ85, HK89, HHvR04]. **Lobatto** [Hem75]. **local** [FHST95]. **LU** [Hem80b]. **LU-decomposition** [Hem80b].

Maken [Hem90a]. **Manifold** [ELE+06, EH08, HE07b, HE07a]. **Manifold-mapping** [ELE+06, HE07a]. **Manual** [EHS95]. **mapping** [EH05, ELE+06, EH08, ELH08a, ELH08b, HE07b, HE07a]. **Math.** [Hem96a]. **Mathematical** [HdH06, HKT93, HHA09]. **measurement** [HH09, HH13]. **measuring** [HHA09]. **meerstapsmethoden** [Hem71b]. **Mesh** [HS94b, PWBH81, SSH04]. **Mesh-Parameter** [PWBH81]. **meshes** [SSH97]. **method** [FHST95, Hem74a, Hem75, Hem80b, Hem82a, HKS86, Hem88b, HK89, Hem90b, HSS98, HSS99a, KSS04, PWBH81, SSH97, vRH05, vdMHKM93]. **Methods** [HSS97b, dH79, Hem72a, Hem81a, Hem81b, HS81, HKWdZ83, Hem83a, Hem84d, HW94b, HST02, TH91, TH94]. **Miller** [HOS03]. **Mixed** [Hem82d, Hem84a].

mixtures [HHH72]. **Model** [Hem00, HHH00, Hem96c, NH00]. **models** [HdH06]. **modules** [HWD84]. **moving** [SSH04]. **MR1338896** [Hem96a]. **Multi** [Hem80c, KH91c, KH92b, Hem80b, Hem80d, Hem86b, HKS86, HK91]. **Multi-** [KH92b]. **Multi-dimensional** [KH91c, HK91]. **Multi-grid** [Hem80c, Hem80b, HKS86]. **multi-level** [Hem80d]. **Multigrid** [DHH+91, HKWdZ83, Hem83a, Hem84b, Hem84c, Hem84d, HS84, HS85a, HS85b, HJ87, Hem87, HK88c, HW94a, HW94b, HKL+95, HKN97, HKL+97a, HKL+97b, HK97, KHE97, VH95, WHO08, Hem81a, Hem82f, HWD84, HdZ85, HK88a, HK88b, Hem88a, Hem88b, HK89, HvdME90, Hem90b, Hem90c, HM91, Hem92, HK94, Hem94, HK95a, HK95b, Hem95b, Hem96a, Hem97, HKN98, HHvR03b, KdH88, KH91a, KH91b, KH91c, KH92a, MH90, VKH06, vRH05, vdMHKM93]. **multigridding** [KH92b]. **multilevel** [HE07b]. **Multiple** [HS81, HS86, KHE97, Hem81b]. **myocardial** [DHH+02].

n [TH91]. **n-component** [TH91]. **Navier** [DHH+91, DHK93, HK88c]. **near** [KvBH+03]. **Necessary** [HS94b]. **nested** [Hem73b]. **Neumann** [HSS99b]. **nieuw** [Hem92]. **no** [Hem96a]. **non** [HK89]. **non-linear** [HK89]. **Nonlinear** [vH75, Hem90b, Hem72b, Hem73c, HKS86, HK88a, HK88b, Hem88b, HK94, HK95a, HK95b]. **note** [Hem82e]. **notes** [Hem81b]. **Novel** [HSS03b]. **NUMAL** [Hem73a, Hem81c]. **Numerical** [Hem72a, Hem77b, HM79, Hem81c, Hem83b, HSS97b, Hem73a, Hem74b, HW79, Hem82a, Hem96c, HSS99b, HST02, SSH97].

obtain [HHA09]. **ODE** [Hem83c]. **one** [Hem74a, Hem88a, Hem88b, Hem90b]. **one-dimensional** [Hem88a, Hem88b, Hem90b]. **one-sided** [Hem74a]. **operator** [Hem73c]. **operators** [HW79, HS01]. **Oplossen** [HR76]. **optimization** [ELE+06, EH08, HE07b, HE07a]. **Order** [HSS97a, Hem86b, Hem90c, HSS99b, HSS00, HSS01b, HSS01a, HSS02a, HSS02c, HSS02b, HSS03a, HSS03b, KSS04]. **Ordered** [HKN97, HP96, HP97, HKN98]. **Osher** [HS86]. **over-set** [HHH00].

package [EHS95]. **Parabolic** [FHS95, FHS96a, HS92, HS93, HS94a, HSS97a, FHS96b, FHS96c, HS95, HSS97c, HSS98, HSS99b, HSS99a, HSS00, HSS01a, HSS02a, HSS02c, HSS02b, HSS03a, HSS03b]. **parallel** [HSS01b, HSS01a]. **Parameter** [Hem72b, HK93, HST02, PWBH81, vH75, EHS95, Hem72a, Hem83a, Hem84d]. **Parameter-uniform** [HST02]. **Partially** [HKN97, HP96, HP97, HKN98]. **patients** [DHH+02]. **PDEs** [HS92, HS93, HS94a]. **PEIA** [RTH+11]. **PEIA-ellipsometry** [RTH+11]. **Perturbation** [HSS97a, Hem00, HHH00, Hem74b, HM79, Hem82a, HD83, Hem83b, Hem84a, HS95, HSS97c, HSS98, HSS00, HSS02b, HSS03a, NH00]. **Perturbed** [FHS95, FHS96a, HS92, HS94b, HS94a, HSS97b, FHST95, FHS96b, FHS96c, Hem83c, Hem96c, HSS99b, HSS01b, HSS01a, HSS02a, HSS02c, HST02, HSS03b, KSS04, SSH97, SSH04]. **Pharmacokinetics** [DHH+02]. **Pocklington** [HL08]. **Point** [Hem77b, dH79, HSd80]. **points** [Hem74a, Hem75]. **portable** [HWD84]. **posteriori** [SSH04]. **preliminaries** [HKT93]. **preliminary** [HW79]. **Principle** [Hem82b, Hem82c]. **Problem** [Hem00, HHH00, Hem74b, Hem82a, HD83, Hem84a, Hem96c, HSS99b, HSS99a, NH00]. **problemen** [Hem92]. **Problems** [FHS95, FHS96a, Hem77b, HKL+95, HSS97b, HKL+97a, HKL+97b, HSS97a, DH90a, DH90b, DH95, vH75, FHST95, FHS96b, FHS96c, dH79, Hem74a, HM79,

HSd80, Hem83a, Hem83b, Hem84d, HS94b, Hem95b, HS95, Hem96a, Hem97, HSS97c, HSS98, HSS00, HSS01b, HSS01a, HSS02a, HSS02c, HSS02b, HSS03a, HSS03b, SSH97, SSH04, VKH06]. **procedure** [Hem71a, HHA09]. **Procedures** [Hem81c, CHvS72, Hem73a, Hem90c]. **processes** [Hem82e]. **project** [HK93]. **prolongations** [Hem80a, Hem90c]. **protein** [DHH+02]. **prothrombin** [HEH+67, HHv+71].

quasilinear [HST02].

randwaardeproblemen [CHvS72, HR76]. **rank** [Hem82e]. **Reaction** [HK93, HH09, HH13, KSS04]. **reaction-diffusion** [KSS04]. **rebuttal** [HdH06]. **rectangle** [HSS98]. **Rede** [Hem90a]. **refinement** [Hem95a]. **region** [HE07a]. **regular** [HP96, HP97]. **Rekenen** [Hem96b]. **relating** [HH09, HH13]. **relaxation** [Hem80b, Hem82f, KdH88]. **Remarks** [Hem94]. **report** [HW79]. **representation** [HS01]. **Research** [DHKL94]. **restrictions** [Hem80a, Hem90c]. **results** [Hem90b, NH97, NH98]. **Richardson** [KSS04]. **Robin** [HSS02c, HSS03a]. **rules** [Hem73b]. **Run** [Hem84c, Hem84b].

scheme [HS86]. **Schemes** [DHH+91, HSS97a, KH97, Hem86b, HK88c, HSS00, HSS01b, HSS01a, HSS02a, HSS02c, HSS02b, HSS03a, HSS03b, KH91c]. **second** [HS81]. **Seidel** [Hem82f, KdH88]. **Semi** [KHE97, KHd97, Hem95a]. **Semi-Coarsened** [KHE97]. **Semi-Coarsening** [KHd97]. **semi-refinement** [Hem95a]. **semiconductor** [Hem88a, Hem88b, Hem90b, HM91, MH90]. **seminar** [Hem81b]. **sequence** [Hem73b]. **set** [HHH00]. **Sets** [HKN97, HP96, HP97, HKN98]. **shifts** [HDH05]. **sided** [Hem74a]. **simulation** [Hem72a, Hem88a, Hem88b, Hem90b, WHH06]. **Single** [HHv+73]. **Single-** [HHv+73]. **Singular** [HSS97a, Hem00, HHH00, Hem74b, HM79, Hem82a, HD83, Hem83b, Hem84a, HS95, HSS97c, HSS98, HSS00, HSS02b, HSS03a, NH00]. **Singularly** [FHS95, FHS96a, HS92, HS94b, HS94a, HSS97b, FHST95, FHS96b, FHS96c, Hem83c, Hem96c, HSS99b, HSS01b, HSS01a, HSS02a, HSS02c, HST02, HSS03b, KSS04, SSH97, SSH04]. **small** [Hem83a, Hem84d]. **software** [EHS95]. **solute** [TH91, TH94]. **Solution** [DHH+91, Hem95a, HSS97b, HKL+97b, DHK93, Hem71a, Hem73c, Hem74b, HS81, Hem82a, Hem82d, HD83, Hem83c, Hem84a, HS85a, HS85b, Hem86b, HS86, HKS86, HM91, HS95, HSS97c, HSS99b, HL08, KvBH+03, MH90, vdMHKM93]. **Solution-Adaptive** [HKL+97b, vdMHKM93]. **solutions** [HS84]. **Solvers** [DHH+91, HKWdZ83, HdZ85]. **solving** [HSS01b]. **Some** [HdZ85, HSd80]. **soort** [Hem92]. **Space** [EH05, ELH08a, ELH08b, HSS03b]. **Sparse** [Hd93a, Hd93b, Hem95b, HdZ97, Hem00, KH97, Hem94, NH97, NH98, NH00, Hem96a]. **Sparse-Grid** [Hem00, Hem95b, Hem94, NH00, Hem96a]. **Special** [WHO08]. **spIds** [EHS95]. **SPR** [RTH+11]. **stable** [HHH72]. **stage** [HHv+71]. **Standard** [HK97]. **staplengte** [Hem71b]. **states** [HHH72]. **Steady** [HKL+95, HKL+97a, HKL+97b, HS84, HS85a, HS85b, Hem86b, HS86, HKS86, HK88a, HK88b, HK88c, HK89, HK91, HK94, HK95a, HK95b, KdH88, KH91b, KH92a, KH92b]. **Stiff** [Hem77b, dH79, Hem71a, Hem74a]. **stijve** [BDHv75, DHv72]. **stimulated** [DHKL94]. **Stokes** [DHH+91, DHK93, HK88c]. **strategy** [HE07a, HL08, VKH06].

Structure [Hd93a, Hd93b, HdZ97, Hem80d, HvdME90]. **Structured** [VH95]. **Study** [Hem77b]. **substrate** [HH09, HH13]. **substrates** [HHA09]. **Supercomputers** [Hem84c, Hem84b]. **system** [Hem72a, HdZ85, WHH06]. **systems** [EHS95, Hem95a].

Technique [HS94b, Hem00, EH08, HHH00, HHA09, NH00, SSH04]. **Techniques** [HK97]. **tests** [HH68]. **theory** [HHH72]. **Three** [KHd97]. **thrombin** [HDH05, HHA09]. **Time** [HSS97a, HH09, HH13, HSS99b, HSS00, HSS01b, HSS01a, HSS02c, HSS02b, HSS03a, HSS03b]. **Time-Accuracy** [HSS97a, HSS00, HSS02b]. **time-accurate** [HSS01b, HSS01a, HSS02c, HSS03a]. **Time-course** [HH09, HH13]. **transform** [HHA09]. **transport** [TH91, TH94]. **transportable** [Hem77a]. **trends** [DHK93]. **trust** [HE07a]. **trust-region** [HE07a]. **turning** [Hem74a]. **tweepunts** [HR76]. **Two** [Hem77b, HHvR03b, vRH05, EH08, dH79, HHv+71, HSd80, HvR04, HHvR04, KdH88, KvBH+03]. **two-dimensional** [KdH88]. **two-fluid** [KvBH+03]. **Two-level** [HHvR03b, vRH05, EH08, HvR04, HHvR04]. **two-point** [dH79, HSd80]. **two-stage** [HHv+71]. **type** [KH97].

uitgesproken [Hem90a]. **Uniform** [HSS97a, HSS99a, HSS00, HST02]. **Universiteit** [Hem90a, Hem96b]. **Upwind** [DHH+91, HK88c, KH91c]. **upwinding** [HK91, KH92b]. **use** [Hem83c, HS95, HSS97c].

Value [FHS95, FHS96a, Hem77b, HS94b, vH75, FHST95, FHS96b, FHS96c, dH79, Hem74a, HSd80]. **variabele** [Hem71b]. **vector** [HWD84]. **vector-code** [HWD84]. **Verbeteren** [Hem90a]. **Volume** [VH95, Hem94, Hem95b, Hem96a, Hem97]. **voor** [CHvS72, Hem92].

Wavelet [HP93]. **Wavelets** [HKT93]. **weighted** [Hem74a]. **which** [HS94b]. **wire** [HL08]. **Wiskunde** [Hem90a]. **without** [Hem82a, HHA09].

References

Beentjes:1975:CSD

[BDHv75] P. A. Beentjes, K. Dekker, P. W. Hemker, and M. van Veldhuizen. *Colloquium stijve differentiaalvergelijkingen, deel 3*, volume 15.3 of *Mathematical Centre Syllabus*. Mathematical Centre, Amsterdam, The Netherlands, 1975.

Bakker:1976:CD

[BHPv76] M. Bakker, P. W. Hemker, S. J. Polak, and M. van Veldhuizen. *Colloquium Discretiseringsmethoden*, volume 27 of *Mathematical Centre Syllabus*. Mathematical Centre, Amsterdam, The Netherlands, 1976.

Boehmer:1984:DCAa

[BHS84] K. Böhmer, P. W. Hemker, and H. J. Stetter. The defect correction approach. In K. Böhmer and H. J. Stetter, editors, *Defect Correction Methods: Theory and Applications*, volume 5 of *Computing. Supplementum*, pages 1–32. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1984. CODEN COSPDM. ISSN 0344-8029.

Coolen:1972:APV

[CHvS72] T. M. T. Coolen, P. W. Hemker, P. J. van der Houwen, and E. Slagt. *ALGOL 60 procedures voor begin- en randwaardeproblemen*, volume 20 of *Mathematical Centre Syllabus*. Mathematical Centre, Amsterdam, The Netherlands, 1972.

Groen:1979:EBE

[dH79] P. P. N. de Groen and P. W. Hemker. Error bouds for exponentially fitted Galerkin methods applied to stiff two-point boundary-value problems. In P. W. Hemker and J. J. H. Miller, editors, *Numerical Analysis of Singular Perturbation problems*, pages 217–249. Academic Press, London, 1979.

Desideri:1990:ACIa

[DH90a] J.-A. Désidéri and P. W. Hemker. Analysis of the convergence of iterative implicit and defect-correction algorithms for hyperbolic problems. Technical Report NM-R9004, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1990.

Desideri:1990:ACIb

[DH90b] J.-A. Désidéri and P. W. Hemker. Analysis of the convergence of iterative implicit and defect-correction algorithms for hyperbolic problems. Technical Report RR No 1200, INRIA, 1990.

Desideri:1995:CAD

[DH95] J.-A. Désidéri and P. W. Hemker. Convergence analysis of the defect-correction iteration for hyperbolic problems. *SIAM Journal on Scientific Computing*, 16(1):88–118, 1995. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Deconinck:1991:SAN

[DHH+91] H. Deconinck, P. W. Hemker, Ch. Hirsch, M. Napolitano, and P. Larsen. Solution adaptive Navier–Stokes solvers with grid decoupled upwind schemes and multigrid acceleration. Technical report, Von Karman Institute, Rhode St. Genese, 1991.

Diris:2002:PCI

[DHH+02] J. H. Diris, W. T. Hermens, P. W. Hemker, W. K. Lagrand, C. E. Hack, and M. P. van Dieijen-Visser. Pharmacokinetics of C1-inhibitor protein in patients with acute myocardial infarction. *Clin Pharmacol Ther.*, 72(5):498–504, November 2002.

Deconinck:1993:NTS

[DHK93] H. Deconinck, P. W. Hemker, and B. Koren. New trends in the solution of the Navier–Stokes equations for compressible flows. In H. J. Allgeier, editor, *Proceedings of the Aerodays 93, 2nd European Communities Aeronautics RTD Conference, Naples,*

1993, pages 109–116. Commission of the European Communities, Luxembourg, 1993.

Desideri:1994:RCF

[DHKL94] Jean-Antoine Désidéri, Pieter W. Hemker, Barry Koren, and Marie-Hélène Lallemand. Research in computational fluid dynamics, stimulated by ERCIM. In *From universal morphisms to megabytes: a Baayen space odyssey*, pages 269–286. Stichting Mathematisch Centrum, Centrum voor Wiskunde en Informatica, Amsterdam, The Netherlands, 1994.

Dekker:1972:CSD

[DHv72] Th.J. Dekker, P. W. Hemker, and P. J. van der Houwen. *Colloquium stijve differentiaalvergelijkingen, deel 1*, volume 15.1 of *Mathematical Centre Syllabus*. Mathematical Centre, Amsterdam, The Netherlands, 1972.

Echeverria:2005:SMDb

[EH05] D. Echeverría and P. W. Hemker. Space mapping and defect correction. *Computational Methods in Applied Mathematics*, 5(2):107–136 (electronic), 2005. ISSN 1609-4840 (print), 1609-9389 (electronic).

Echeverria:2008:MMT

[EH08] D. Echeverría and P. W. Hemker. Manifold mapping: a two-level optimization technique. *Computing and Visualization in Science*, 11(4–6): 193–206, 2008. ISSN 1432-9360 (print), 1433-0369 (electronic).

Everaars:1995:MSS

[EHS95] C. T. H. Everaars, P. W. Hemker, and W. Stortelder. Manual of spIds, A software package for parameter identification in dynamical systems. Technical Report NM-R9521, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1995.

Echeverria:2006:MMO

[ELE+06] D. Echeverria, D. Lahaye, L. Encica, E. A. Lomonova, P. W. Hemker, and A. J. A. Vandenput. Manifold-mapping optimization applied to linear actuator design. *IEEE Transactions on Magnetics*, 42(4): 1183–1186, April 2006. CODEN IEMGAQ. ISSN 0018-9464 (print), 1941-0069 (electronic).

Echeverria:2008:SMD

[ELH08a] David Echeverría, Domenico Lahaye, and Piet W. Hemker. Space mapping and defect correction. In *Model order reduction: theory, research aspects and applications*, volume 13 of *Math. Ind.*, pages 157–176. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2008.

Echeverria:2008:SMDa

[ELH08b] David Echeverría, Domenico Lahaye, and Piet W. Hemker. Space mapping and defect correction. In Wilhelmus H. A. Schilders et al., editors, *Model order reduction: Theory, research aspects and applications. Selected papers based on the presentations at the workshop 'Model order reduction, coupled problems and optimization', Leiden, The Netherlands, September 19–23, 2005*, volume 13 of *Mathematics in Industry*, pages 157–176. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2008.

Farrell:1995:DAS

[FHS95] P. A. Farrell, P. W. Hemker, and G. I. Shishkin. Discrete approximations for singularly perturbed boundary value problems with parabolic layers. Technical Report NM-R9502, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1995.

Farrell:1996:DASa

[FHS96a] P. A. Farrell, P. W. Hemker, and G. I. Shishkin. Discrete approximations for singularly perturbed boundary value problems with parabolic layers, I. *Journal of Computational Mathematics*, 14(1):71–97, 1996. CODEN JCMMEB. ISSN 0254-9409 (print), 1991-7139 (electronic).

Farrell:1996:DASb

[FHS96b] P. A. Farrell, P. W. Hemker, and G. I. Shishkin. Discrete approximations for singularly perturbed boundary value problems with parabolic layers. II. *Journal of Computational Mathematics*, 14(2):183–194, 1996. CODEN JCMMEB. ISSN 0254-9409 (print), 1991-7139 (electronic).

Farrell:1996:DASc

[FHS96c] P. A. Farrell, P. W. Hemker, and G. I. Shishkin. Discrete approximations for singularly perturbed boundary value problems with parabolic layers. III. *Journal of Computational Mathematics*, 14(3):273–290, 1996. CODEN JCMMEB. ISSN 0254-9409 (print), 1991-7139 (electronic).

Farrell:1995:DDM

[FHST95] P. A. Farrell, P. W. Hemker, G. I. Shishkin, and I. V. Tselishcheva. A domain decomposition method for singularly perturbed boundary value problems with a local distribution of the initial conditions. In *Abstracts of the International Conference on Advanced Mathematics, V. Computations and Applications*, page 102. ????, ????, 1995. Novosibirsk, June 20–24.

Hemker:1983:DCSa

[HD83] P. W. Hemker and P. M. De Zeeuw. Defect correction

for the solution of a singular perturbation problem. In R. S. Stepleman, editor, *Scientific Computing*, pages 113–118. North-Holland, Amsterdam, The Netherlands, 1983.

Hemker:1993:BDSa

[Hd93a] P. W. Hemker and P. M. de Zeeuw. BASIS3: A data structure for 3-dimensional sparse grids. Technical Report CR-1993-30, Von Karman Institute, Rhode St. Genese, 1993.

Hemker:1993:BDSb

[Hd93b] P. W. Hemker and P. M. de Zeeuw. BASIS3: A data structure for 3-dimensional sparse grids. Technical Report NM-R9321, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1993.

Hemker:1993:CBD

[HD93c] P. W. Hemker and J.-A. Désidéri. Convergence behaviour of defect correction for hyperbolic equations. *Journal of Computational and Applied Mathematics*, 45(3):357–365, 1993. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Hemker:2005:DCT

[HDH05] H. C. Hemker, E. De Smedt, and P. W. Hemker. During coagulation, thrombin generation shifts from chemical to diffusional control. *Journal of Thrombosis and Haemostasis: JTH*, 3(11):2399–2400, November 2005. ISSN 1538-7836 (print), 1538-7933 (electronic).

Hemker:2006:MBM

[HdH06] H. C. Hemker, E. de Smedt, and P. W. Hemker. Mathematical and biological models of blood coagulation. a rebuttal. *Journal of Thrombosis and Haemostasis: JTH*, 4(3):710–711, March 2006. ISSN 1538-7836 (print), 1538-7933 (electronic).

Hemker:1985:SIMa

[HdZ85] P. W. Hemker and P. M. de Zeeuw. Some implementations of multigrid linear system solvers. In D. J. Paddon and H. Holstein, editors, *Multigrid methods for integral and differential equations (Bristol, 1983)*, volume 3 of *The Institute of Mathematics and its Applications Conference Series*, pages 85–116. Clarendon Press, Oxford, UK, 1985.

Hemker:1997:BDS

[HdZ97] P. W. Hemker and P. M. de Zeeuw. BASIS3: A data structure for 3-dimensional sparse grids. In *Euler and Navier–Stokes Solvers Using Multi-Dimensional Upwind Schemes and Multigrid Acceleration*, volume 57 of *Notes on Numerical Fluid Mechanics*, pages 443–484. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1997.

Hemker:2007:TRS

[HE07a] P. W. Hemker and D. Echeverría. A trust-region strategy for manifold-mapping optimization. *Journal of computational physics*, 224(1):464–475, May 20, 2007. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL `http://www.sciencedirect.com/science/article/pii/S0021999107001519`.

Hemker:2007:MMM

[HE07b] Pieter W. Hemker and David Echeverría. Manifold mapping for multilevel optimization. In *Scientific computing in electrical engineering*, volume 11 of *Math. Ind.*, pages 325–330. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2007.

Hemker:1967:FPC

[HEH+67] H. C. Hemker, M. P. Esnouf, P. W. Hemker, A. C. W. Swart, and R. G. MacFarlane. Formation of prothrombin converting activity. *Nature*, 215(5098): 248–251, July 15, 1967. CODEN NATUAS. ISSN 0028-0836 (print), 1476-4687 (electronic).

Hemker:1971:APS

[Hem71a] P. W. Hemker. An ALGOL 60 procedure for the solution of stiff differential equations. Technical Report MR 128, Mathematical Centre, Amsterdam, The Netherlands, 1971.

Hemker:1971:LMM

[Hem71b] P. W. Hemker. Lineaire meerstapsmethoden met variabele staplengte. Technical Report NR 15, Mathematical Centre, Amsterdam, The Netherlands, 1971.

Hemker:1972:NMD

[Hem72a] P. W. Hemker. Numerical methods for differential equations in system simulation and in parameter estimation. In H. C. Hemker and B. Hess, editors, *Analysis and Simulation of biochemical systems*, pages 59–80. North-Holland, Amsterdam, The Netherlands, 1972.

Hemker:1972:PEN

[Hem72b] P. W. Hemker. Parameter estimation in nonlinear differential equations. Technical Report MR 134, Mathematical Centre, Amsterdam, The Netherlands, 1972.

Hemker:1973:NLN

[Hem73a] P. W. Hemker. NUMAL, a library of numerical procedures in ALGOL 60: Index and KWIC index. Technical Report NW 8, Mathematical Centre, Amsterdam, The Netherlands, 1973.

Hemker:1973:SNC

[Hem73b] P. W. Hemker. A sequence of nested cubature rules. Technical Report NW 3, Mathematical Centre, Amsterdam, The Netherlands, 1973.

Hemker:1973:SNE

[Hem73c] P. W. Hemker. The solution of a nonlinear elliptic operator equation by finite elements. Technical Report NW 6, Mathematical Centre, Amsterdam, The Netherlands, 1973.

Hemker:1974:MWO

[Hem74a] P. W. Hemker. A method of weighted one-sided differences for stiff boundary value problems with turning points. Technical Report NW 9, Mathematical Centre, Amsterdam, The Netherlands, 1974.

Hemker:1974:NSS

[Hem74b] P. W. Hemker. The numerical solution of a singular perturbation problem in the domain exterior of a circle. Technical Report NW 11, Mathematical Centre, Amsterdam, The Netherlands, 1974.

Hemker:1975:GML

[Hem75] P. W. Hemker. Galerkin's method and Lobatto points. Technical Report NW 24, Mathematical Centre, Amsterdam, The Netherlands, 1975.

Hemker:1977:CTA

[Hem77a] P. W. Hemker. Criteria for transportable ALGOL libraries. In W. Cowell, editor, *Portability of numerical software*, volume 57 of *Lecture Notes in Computer Science*, pages 145–157. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 1977.

Hemker:1977:NSS

[Hem77b] P. W. Hemker. *A Numerical Study of Stiff Two Point Boundary Value Problems*, volume 80 of *Mathematical Centre Tract*. Mathematical Centre, Amsterdam, The Netherlands, 1977.

Hemker:1980:FAG

[Hem80a] P. W. Hemker. Fourier analysis of gridfunctions, prolongations and restrictions. Technical Report NW 93, Mathematical Centre, Amsterdam, The Netherlands, 1980.

Hemker:1980:ILDa

[Hem80b] P. W. Hemker. The incomplete LU-decomposition as a relaxation method in multi-grid algorithms. In J. J. H. Miller, editor, *Boundary and Interior Layers—Computational and Asymptotic Methods*, pages 306–311. Boole Press, Dublin, Ireland, 1980.

Hemker:1980:MGBa

[Hem80c] P. W. Hemker. Multi-grid bibliography. In J. Verwer, editor, *Colloquium Numerical Integration of Partial Differential Equations*. Dept. of Numerical Mathematics, Mathematical Center, Amsterdam, The Netherlands, 1980.

Hemker:1980:SAM

[Hem80d] P. W. Hemker. On the structure of an adaptive multi-level algorithm. *BIT*, 20(3):289–301, 1980. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

Hemker:1981:IMMa

[Hem81a] P. W. Hemker. Introduction to multigrid methods. *Nieuw Archief voor Wiskunke*, 3:71–101, 1981. CODEN NAWIA7. ISSN 0028-9825.

Hemker:1981:LNS

[Hem81b] P. W. Hemker. Lecture notes of a seminar on multiple grid methods. Technical Report NN 24, Mathematical Centre, Amsterdam, The Netherlands, 1981.

Hemker:1981:NNP

[Hem81c] P. W. Hemker. *NUMAL, Numerical Procedures in ALGOL 60*, volume 47.1–47.7 of *Mathematical Centre Syllabus*. Mathematical Centre, Amsterdam, The Netherlands, 1981. 7 Vols.: 1. Elementary procedures, 2. Algebraic evaluations, 3. Linear Algebra, 4. Analytic Evaluations, 5. Analytic problems, 6. Special Functions, 7. Interpolation and Approximation.

Hemker:1982:AMD

[Hem82a] P. W. Hemker. An accurate method without directional bias for the numerical solution of a 2-D elliptic singular perturbation problem. *Lecture Notes in Mathematics*, 942:192–206, 1982. CODEN LNMAA2. ISBN 3-540-11584-6 (print), 3-540-39332-3 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL `http://link.springer.com/chapter/10.1007/BFb0094748/`.

Hemker:1982:DCP

[Hem82b] P. W. Hemker. The defect correction principle. In J. J. H. Miller, editor, *An Introduction to Computational and Asymptotic Methods for Boundary And Interior Layers*, pages 11–45. Boole Press, Dublin, 1982.

Hemker:1982:EDCa

[Hem82c] P. W. Hemker. Extensions of the defect correction principle. In J. J. H. Miller, editor, *An Introduction to Computational and Asymptotic Methods for Boundary and Interior Layers*, Short Course, pages 33–45. Boole Press, Dublin, Ireland, 1982.

Hemker:1982:MDC

[Hem82d] P. W. Hemker. Mixed defect correction iteration for the accurate solution of the convection diffusion equation. *Lecture Notes in Mathematics*, 960:485–501, 1982. CODEN LNMAA2. ISBN 3-540-11955-8 (print), 3-540-39544-X (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL `http://link.`

springer.com/chapter/10.1007/BFb0069940/.

Hemker:1982:NDCa

[Hem82e] P. W. Hemker. A note on defect correction processes with an approximate inverse of deficient rank. *Applied Mathematics and Computation*, 8:137–139, 1982. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Hemker:1982:CLGa

[Hem82f] P. W. Hemker. On the comparison of Line-Gauss–Seidel and ILU relaxation in multigrid algorithms. In J. J. H. Miller, editor, *Computational and Asymptotic Methods for Boundary and Interior Layers*, pages 269–277. Boole Press, Dublin, Ireland, 1982.

Hemker:1983:MMPa

[Hem83a] P. W. Hemker. Multigrid methods for problems with a small parameter in the highest derivative. In G. A. Watson, editor, *Numerical Analysis*, volume 1066 of *Lecture Notes in Mathematics*, pages 106–121. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1983.

Hemker:1983:NAS

[Hem83b] P. W. Hemker. Numerical aspects of singular perturbation problems. *Lecture Notes in Mathematics*, 985:267–287, 1983. CODEN LNMAA2. ISBN 3-540-12286-9 (print), 3-540-39612-8 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL http://link.springer.com/chapter/10.1007/BFb0062371/.

Hemker:1983:UDCa

[Hem83c] P. W. Hemker. The use of defect correction for the solution of a singularly perturbed ODE. In R. März, editor, *Proceedings of the Third Conference on the Numerical Treatment of Ordinary Differential Equations*, pages 91–104. Humboldt Universität, Berlin, 1983.

Hemker:1984:MDCa

[Hem84a] P. W. Hemker. Mixed defect correction iteration for the solution of a singular perturbation problem. In K. Böhmer and H. J. Stetter, editors, *Defect Correction Methods: Theory and Applications*, volume 5 of *Computing. Supplementum*, pages 123–145. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1984. CODEN COSPDM. ISSN 0344-8029.

Hemker:1984:MARa

[Hem84b] P. W. Hemker. Multigrid algorithms run on supercomputers. *Supercomputer*, 4:44–51, 1984. CODEN SPCOEL. ISSN 0168-7875.

Hemker:1984:MARb

[Hem84c] P. W. Hemker. Multigrid algorithms run on supercomput-

ers. *CWI-Newsletter*, 3:25–30, 1984.

Hemker:1984:MMP

[Hem84d] P. W. Hemker. Multigrid methods for problems with a small parameter in the highest derivative. *Lecture Notes in Mathematics*, 1066:106–121, 1984. CODEN LNMAA2. ISBN 3-540-13344-5 (print), 3-540-38881-8 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL `http://link.springer.com/chapter/10.1007/BFb0099520/`.

Hemker:1986:CLE

[Hem86a] P. W. Hemker. Computation of layers in Euler gas flow. In J. J. H. Miller S. K. Godunov and V. A. Novikov, editors, *BAIL IV, Proceedings of the Fourth International Conference on Boundary and Interior Layers, Novosibirsk.*, pages 320–324. Boole Press, Dublin, Ireland, 1986.

Hemker:1986:DCH

[Hem86b] P. W. Hemker. Defect correction and higher order schemes for the multi grid solution of the steady Euler equations. *Lecture Notes in Mathematics*, 1228:149–165, 1986. CODEN LNMAA2. ISBN 3-540-17198-3 (print), 3-540-47372-6 (e-book). ISSN 0075-8434 (print), 1617-9692 (electronic). URL `http://link.springer.com/chapter/10.1007/BFb0072646/`.

Hemker:1987:MIAa

[Hem87] P. W. Hemker. Multigrid and improved accuracy for the Euler equations. In E. Adams, R. Ansorge, Ch. Grossmann, and H.-G. Roos, editors, *Discretization in Differential Equations and Enclosures (Weissig, 1986)*, volume 36 of *Math. Res.*, pages 123–136. Akademie-Verlag, Berlin, Germany, 1987.

Hemker:1988:MAOa

[Hem88a] P. W. Hemker. A multigrid approach for one-dimensional semiconductor device simulation. In W. Joppich and U. Trottenberg, editors, *Device Simulation –Numerische Problemfelder–*, volume 144 of *GMD-Studien*. GMD, Bonn, Germany, 1988.

Hemker:1988:NMMa

[Hem88b] P. W. Hemker. A nonlinear multigrid method for one-dimensional semiconductor device simulation. In Guo Ben-Yu, J. J. H. Miller, and Shi Zhong-ci, editors, *BAIL V, Proceedings of the Fifth International Conference on Boundary and Interior Layers, Shanghai, 1988*, volume 12 of *Boole Press Conf. Ser.*, pages 18–29. Boole Press, Dublin, Ireland, 1988.

Hemker:1990:FMV

[Hem90a] P. W. Hemker. Fouten Maken en Verbeteren. Rede uitgesproken bij de aanvaarding van het

ambt van Bijzonder hoogleraar in de Industriële Wiskunde aan de Universiteit van Amsterdam, Juni 12, 1990.

Hemker:1990:NMMa

[Hem90b] P. W. Hemker. Nonlinear multigrid method for one-dimensional semiconductor device simulation: results for the diode. *Journal of Computational and Applied Mathematics*, 30:117–126, 1990. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Hemker:1990:OPRa

[Hem90c] P. W. Hemker. On the order of prolongations and restrictions in multigrid procedures. *Journal of Computational and Applied Mathematics*, 32(3):423–429, 1990. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Hemker:1992:NSM

[Hem92] P. W. Hemker. Een nieuw soort multigrid voor problemen in 3D. In *Is er nog nieuws?* Universiteit van Amsterdam, Amsterdam, The Netherlands, 1992. Bijdrage in het Liber Amicorum, ter gelegenheid van het afscheid van prof. T.J. Dekker.

Hemker:1994:RSG

[Hem94] P. W. Hemker. Remarks on sparse-grid finite-volume multigrid. Technical Report NM-R9421, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1994.

Hemker:1995:SES

[Hem95a] P. W. Hemker. Solution of 3D elliptic systems by semi-refinement. *Analele Stiintifice ale Universitatii Ovidius Constanta, Seria Matematica*, 3(1): 63–82, 1995. ISSN 1223-723X.

Hemker:1995:SGF

[Hem95b] P. W. Hemker. Sparse-grid finite-volume multigrid for 3D-problems. *Advances in computational mathematics*, 4(1–2): 83–110, December 1995. CODEN ACMHEX. ISSN 1019-7168 (print), 1572-9044 (electronic). URL `http://link.springer.com/article/10.1007/BF02123474`. ???

Hemker:1996:CSG

[Hem96a] P. W. Hemker. Corrigendum: "Sparse-grid finite-volume multigrid for 3D-problems" [*Adv. Comput. Math.* **4** (1995), no. 1–2, 83–110; MR1338896 (96c:65193)]. *Advances in computational mathematics*, 5(1):125–126, December 1996. CODEN ACMHEX. ISSN 1019-7168 (print), 1572-9044 (electronic). URL `http://link.springer.com/article/10.1007/BF02124737`; `http://link.springer.com/content/pdf/10.1007/BF02124737.pdf`. See [Hem95b].

Hemker:1996:RAU

[Hem96b] P. W. Hemker. Rekenen aan de universiteit. *Nieuwsbrief van de vakgroep Wiskunde*, september:5–7, 1996.

Hemker:1996:SPM

[Hem96c] P. W. Hemker. A singularly perturbed model problem for numerical computation. *Journal of Computational and Applied Mathematics*, 76 (1–2):277–285, 1996. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Hemker:1997:FVM

[Hem97] P. W. Hemker. Finite volume multigrid for 3D-problems. In *Euler and Navier–Stokes Solvers Using Multi-Dimensional Upwind Schemes and Multigrid Acceleration*, volume 57 of *Notes on Numerical Fluid Mechanics*, pages 485–509. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1997.

Hemker:2000:AAS

[Hem00] P. W. Hemker. Application of an adaptive sparse-grid technique to a model singular perturbation problem. *Computing: Archiv für informatik und numerik*, 65(4):357–378, December 2000. CODEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic). URL `http://link.springer-ny.com/link/service/journals/00607/bibs/0065004/00650357.htm`; `http://link.springer-ny.com/link/service/journals/00607/papers/0065004/00650357.pdf`.

Hemker:1968:KAI

[HH68] H. C. Hemker and P. W. Hemker. Kinetic aspects of the interaction of blood clotting enzymes. IV. Kinetics of competitive inhibition in clotting tests. *Thrombosis et diathesis haemorrhagica*, 19(3):364–367, July 31, 1968. CODEN TDHAAT. ISSN 0340-5338.

Hemker:1969:GKE

[HH69] H. C. Hemker and P. W. Hemker. General kinetics of enzyme cascades. *Proceedings of the Royal Society of London. Series B. Biological sciences*, 173(1032):411–420, July 1, 1969. CODEN PRLBA4. ISSN 0962-8452 (print), 1471-2954 (electronic).

Hemker:2009:TCM

[HH09] Hendrik Coenraad L. M. Hemker and Pieter Wilhelm Hemker. Time-course measurement of enzymatic activity corrected for impacts of disturbances relating to the reaction of the enzyme with a substrate. *Official Gazette of the United States Patent and Trademark Office Patents*, ??(??):??, August 13, 2009. CODEN OGUPE7. ISSN 0098-1133 (print), 1554-9550 (electronic). URL `https://www.google.com/patents/WO2009098313A1?cl=en`. Patent

WO2009098313 A1, filed 7 February 2008.

Hemker:2013:TCM

[HH13] H. C. L. M. Hemker and P. W. Hemker. Time-course measurement of enzymatic activity corrected for impacts of disturbances relating to the reaction of the enzyme with a substrate, October 8, 2013. URL `https://www.google.com/patents/US8551722`. US Patent 8,551,722, filed 6 February 2009.

Hemker:2009:TMT

[HHA09] H. Coen Hemker, Pieter W. Hemker, and Raed Al Dieri. The technique of measuring thrombin generation with fluorescent substrates: 4. The H-transform, a mathematical procedure to obtain thrombin concentrations without external calibration. *Thrombosis and Haemostasis*, 101(1):171–177, January 2009. ISSN 0340-6245. Erratum in **101**(2):412, February 2009.

Hermens:1972:TGS

[HHH72] W.Th. Hermens, H. C. Hemker, and P. W. Hemker. On the theory of the generation of stable inhomogeneous states in homogeneous mixtures. In H. C. Hemker and B. Hess, editors, *Analysis and Simulation of biochemical systems*, pages 19–37. North-Holland, Amsterdam, The Netherlands, 1972.

Havik:2000:ASG

[HHH00] E. D. Havik, P. W. Hemker, and W. Hoffmann. Application of the over-set grid technique to a model singular perturbation problem. *Computing: Archiv für informatik und numerik*, 65(4):339–356, 2000. CODEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic). URL `http://link.springer-ny.com/link/service/journals/00607/bibs/0065004/00650339.htm`; `http://link.springer-ny.com/link/service/journals/00607/papers/0065004/00650339.pdf`.

Hemker:1965:KAI

[HHL65] H. C. Hemker, P. W. Hemker, and E. A. Loeliger. Kinetic aspects of the interaction of blood clotting enzymes. I. Derivation of basic formulas. *Thrombosis et diathesis haemorrhagica*, 13(??):155–175, March 15, 1965. CODEN TDHAAT. ISSN 0340-5338.

Hemker:1971:ETS

[HHv+71] H. C. Hemker, P. W. Hemker, K. van de Torren, P. P. Devillee, W. Th. Hermens, and E. A. Loeliger. The evaluation of a two-stage prothrombin assay. *Thrombosis et diathesis haemorrhagica*, 25(3):545–554, June 1971. CODEN TDHAAT. ISSN 0340-5338.

Hemker:1973:SDL

[HHv+73] P. W. Hemker, W. Hoffmann,

S. P. N. van Kampen, H. L. Oudshoorn, and D. T. Winter. Single- and double-length computation of elementary functions. Technical Report NW 7, Mathematical Centre, Amsterdam, The Netherlands, 1973.

Hemker:2003:DGD

[HHvR03a] P. W. Hemker, W. Hoffmann, and M. H. van Raalte. Discontinuous Galerkin discretization with embedded boundary conditions. *Computational Methods in Applied Mathematics*, 3 (1):135–158 (electronic), 2003. ISSN 1609-4840 (print), 1609-9389 (electronic). Dedicated to Raytcho Lazarov.

Hemker:2003:TLF

[HHvR03b] P. W. Hemker, W. Hoffmann, and M. H. van Raalte. Two-level Fourier analysis of a multigrid approach for discontinuous Galerkin discretization. *SIAM Journal on Scientific Computing*, 25(3): 1018–1041 (electronic), 2003. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL `http://epubs.siam.org/sam-bin/dbq/article/40510`.

Hemker:2004:FTLb

[HHvR04] P. W. Hemker, W. Hoffmann, and M. H. van Raalte. Fourier two-level analysis for discontinuous Galerkin discretization with linear elements. *Numerical Linear Algebra with Applications*, 11(5–6):473–491, June/August 2004. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Hemker:1987:MAEa

[HJ87] P. W. Hemker and G. M. Johnson. Multigrid approaches to the Euler equations. In S. F. McCormick, editor, *Multigrid Methods*, volume 3 of *Frontiers in Applied Mathematics*, pages 57–72. SIAM, Philadelphia, PA, USA, 1987.

Hemker:1988:DCNa

[HK88a] P. W. Hemker and B. Koren. Defect correction and nonlinear multigrid for the steady Euler equations. Technical Report NM-N8801, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1988. Lecture Notes of a course given at VKI, March 7–11, 1988.

Hemker:1988:DCNb

[HK88b] P. W. Hemker and B. Koren. Defect correction and nonlinear multigrid for the steady Euler equations. In *Computational fluid dynamics, Vol. 1, 2*, volume 88 of *von Karman Inst. Fluid Dynam. Lecture Ser.*, page 59. von Karman Inst. Fluid Dynamics, Rhode, 1988.

Hemker:1988:MDCa

[HK88c] P. W. Hemker and B. Koren. Multigrid, defect correction and upwind schemes for the steady Navier–Stokes equations. In K. W. Morton and

M. J. Baines, editors, *Numerical Methods for Fluid Dynamics, III (Oxford, 1988)*, volume 17 of *Inst. Math. Appl. Conf. Ser. New Ser.*, pages 153–170. Clarendon Press, Oxford, UK, 1988.

Hemker:1989:NLM

[HK89] P. W. Hemker and B. Koren. A non-linear multigrid method for the steady Euler equations. In A. Dervieux, B. van Leer, J. Périaux, and A. Rizzi, editors, *Numerical Simulation of Compressible Euler Flows*, volume 26 of *Notes on Numerical Fluid Mechanics*, pages 175–196. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1989.

Hemker:1991:EMD

[HK91] P. W. Hemker and B. Koren. Efficient multi-dimensional upwinding for the steady Euler equations. Technical Report NM-R9107, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1991.

Hemker:1993:PPI

[HK93] P. W. Hemker and J. Kok. A project on parameter identification in reaction kinetics. Technical Report NM-R9301, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1993.

Hemker:1994:DCN

[HK94] P. W. Hemker and B. Koren. Defect correction and nonlinear multigrid for steady Euler equations. In W. G. Habashi, editor, *Proceedings of the International Workshop on Solution Techniques for Large-Scale CFD Problems, Montréal, 1994*, pages 223–241. Centre de Recherche en Calcul Appliqué, Montréal, 1994.

Hemker:1995:DCNa

[HK95a] P. W. Hemker and B. Koren. Defect correction and nonlinear multigrid for steady Euler equations. In W. G. Habashi, editor, *Solution Techniques for Large-scale CFD Problems*, pages 273–291. John Wiley and Sons, New York, NY, USA; London, UK; Sydney, Australia, 1995.

Hemker:1995:DCNb

[HK95b] P. W. Hemker and B. Koren. Defect correction and nonlinear multigrid for steady Euler equations. In W. G. Habashi and M. M. Hafez, editors, *Computational Fluid Dynamics Techniques*, pages 699–718. Gordon and Breach, Basel, 1995.

Hemker:1997:SMT

[HK97] P. W. Hemker and B. Koren. Standard multigrid techniques for CFD. In H. Deconinck, editor, *Lecture Series on Computational Fluid Dynamics*, volume 1997-02. von Kar-

man Institute for Fluid Dynamics, Rhode Saint Genèse – Belgium, 1997.

Hemker:1995:MSG

[HKL+95] P. W. Hemker, B. Koren, W. M. Lioen, M. Nool, and H. T. M. van der Maarel. Multigrid for steady gas dynamics problems. In M. Hafez and K. Oshima, editors, *Computational Fluid Dynamics Review 1995*, volume 1, pages 477–494. John Wiley and Sons, New York, NY, USA; London, UK; Sydney, Australia, 1995. ISBN 0-471-95589-2. LCCN TA357 .C58785x.

Hemker:1997:MSG

[HKL+97a] P. W. Hemker, B. Koren, W. M. Lioen, M. Nool, and H. T. M. van der Maarel. Multigrid for steady gas dynamics problems. In *Euler and Navier–Stokes Solvers Using Multi-Dimensional Upwind Schemes and Multigrid Acceleration*, volume 57 of *Notes on Numerical Fluid Mechanics*, pages 393–417. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1997.

Hemker:1997:SAM

[HKL+97b] P. W. Hemker, B. Koren, W. M. Lioen, M. Nool, and H. T. M. van der Maarel. Solution-adaptive multigrid for steady gas dynamics problems. In H. Deconinck, editor, *Lecture Series on Computational Fluid Dynamics*, volume 1997-02. von Karman Institute for Fluid Dynamics, Rhode Saint Genèse – Belgium, 1997.

Hemker:1997:MPO

[HKN97] P. W. Hemker, B. Koren, and J. Noordmans. 3D multigrid on partially ordered sets of grids. In H. Deconinck, editor, *Lecture Series on Computational Fluid Dynamics*, volume 1997-02. von Karman Institute for Fluid Dynamics, Rhode Saint Genèse – Belgium, 1997.

Hemker:1998:MPO

[HKN98] P. W. Hemker, B. Koren, and J. Noordmans. 3D multigrid on partially ordered sets of grids. In *Multigrid methods V (Stuttgart, 1996)*, volume 3 of *Lect. Notes Comput. Sci. Eng.*, pages 105–124. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 1998.

Hemker:1986:NMGa

[HKS86] P. W. Hemker, B. Koren, and S. P. Spekreijse. A nonlinear multi-grid method for the efficient solution of the steady Euler equations. In F. G. Zhuang and Y. L. Zhu, editors, *Tenth International Conference on Numerical Methods in Fluid Dynamics*, volume 264 of *Lecture Notes in Physics*, pages 308–313. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo, 1986.

Hemker:1993:WMP

[HKT93] Pieter W. Hemker, Tom H. Koornwinder, and Nico M. Temme. Wavelets: mathematical preliminaries. In T. H. Koornwinder, editor, *Wavelets: An Elementary Treatment of Theory and Applications*, volume 1 of *Ser. Approx. Decompos.*, pages 13–26. World Scientific Publishing Co., Singapore, Philadelphia, River Edge, NJ, 1993.

Hemker:1983:MMDa

[HKWdZ83] P. W. Hemker, R. Kettler, P. Wesseling, and P. M. de Zeeuw. Multigrid methods: development of fast solvers. *Applied Mathematics and Computation*, 13(3–4): 311–326, November 1983. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Hemker:2008:ASS

[HL08] P. W. Hemker and D. J. P. Lahaye. An *hp*-adaptive strategy for the solution of the exact kernel curved wire Pocklington equation. *Computational Methods in Applied Mathematics*, 8(1):39–59, 2008. ISSN 1609-4840 (print), 1609-9389 (electronic).

Hemker:1979:NAS

[HM79] P. W. Hemker and J. J. H. Miller, editors. *Numerical analysis of singular perturbation problems*. Academic Press, New York, NY, USA, 1979. ISBN 0-12-340250-6. LCCN QA371 .N79 1978.

Hemker:1991:AMAa

[HM91] P. W. Hemker and J. Molenaar. An adaptive multigrid approach for the solution of the 2D semiconductor equations. In W. Hackbusch and U. Trottenberg, editors, *Multigrid methods, III (Bonn, 1990)*, volume 98 of *International Series of Numerical Mathematics*, pages 41–60. Birkhäuser Verlag, Basel, 1991.

Hemker:2003:JM

[HOS03] P. W. Hemker, E. O'Riordan, and G. I. Shishkin. John Miller — 65. *Computational Methods in Applied Mathematics*, 3 (3):359–360 (electronic), 2003. ISSN 1609-4840 (print), 1609-9389 (electronic). Dedicated to John J. H. Miller on the occasion of his 65th birthday.

Hemker:1993:WBA

[HP93] Pieter W. Hemker and Frédérique Plantevin. Wavelet bases adapted to inhomogeneous cases. In T. H. Koornwinder, editor, *Wavelets: An Elementary Treatment of Theory and Applications*, volume 1 of *Ser. Approx. Decompos.*, pages 107–128. World Scientific Publishing Co., Singapore, Philadelphia, River Edge, NJ, 1993.

Hemker:1996:APO

[HP96] P. W. Hemker and C. Pflaum. Approximation on partially or-

dered sets of regular grids. Technical Report NM-R9611, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1996.

Hemker:1997:APO

[HP97] P. W. Hemker and C. Pflaum. Approximation on partially ordered sets of regular grids. *Applied Numerical Mathematics: Transactions of IMACS*, 25(1):55–87, 1997. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic). to appear.

Hemker:1976:OVT

[HR76] P. W. Hemker and J. P. Roos. Oplossen van tweepunts randwaardeproblemen. In J. Bus, editor, *Colloquium Numerieke Programmatuur*, volume 29 of *Mathematical Centre Syllabus*, pages 101–142. Mathematical Centre, Amsterdam, The Netherlands, 1976.

Hemker:1981:MGMa

[HS81] P. W. Hemker and H. Schippers. Multiple grid methods for the solution of Fredholm integral equations of the second kind. *Mathematics of Computation*, 36(153):215–232, January 1981. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Hemker:1984:MSSa

[HS84] P. W. Hemker and S. P. Spekreijse. Multigrid solutions of the steady Euler equations. In D. Braess, W. Hackbusch, and U. Trottenberg, editors, *Advances in Multi-Grid Methods*, volume 11 of *Notes on Numerical Fluid Mechanics*, pages 33–44. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1984.

Hemker:1985:MSSa

[HS85a] P. W. Hemker and S. P. Spekreijse. Multigrid solution of the steady Euler equations. In *Advances in multigrid methods (Oberwolfach, 1984)*, volume 11 of *Notes Numer. Fluid Mech.*, pages 33–44. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1985.

Hemker:1985:MSSb

[HS85b] P. W. Hemker and S. P. Spekreijse. *Multigrid solution of the steady Euler equations*. CWI Reports NM, R8505. Stichting Mathematisch Centrum, Centrum voor Wiskunde en Informatica, Amsterdam, The Netherlands, 1985. 13 pp.

Hemker:1986:MGO

[HS86] P. W. Hemker and S. P. Spekreijse. Multiple grid and Osher's scheme for the efficient solution of the steady Euler equations. *Applied Numerical Mathematics: Transactions of IMACS*, 2(6):475–493, December 1986. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Hemker:1992:DAS

[HS92] P. W. Hemker and G. I. Shishkin. Discrete approximation of singularly perturbed parabolic PDEs with a discontinuous initial condition. In J. J. H. Miller, editor, *BAIL VI Proceedings*, pages 3–4. Front Range Press, Copper Mountain, Colorado, USA, 1992.

Hemker:1993:APP

[HS93] P. W. Hemker and G. I. Shishkin. Approximation of parabolic PDEs with a discontinuous initial condition. *East-West Journal of Numerical Mathematics*, 1(4):287–302, 1993. CODEN EJNMEA. ISSN 0928-0200.

Hemker:1994:DAS

[HS94a] P. W. Hemker and G. I. Shishkin. Discrete approximation of singularly perturbed parabolic PDEs with a discontinuous initial condition. *Computational Fluid Dynamics Journal*, 2:375–392, 1994.

Hemker:1994:CSP

[HS94b] P. W. Hemker and G. I. Shishkin. On a class of singularly perturbed boundary value problems for which an adaptive mesh technique is necessary. In D. Bainov and V. Covachev, editors, *Proceedings of the Second International Colloquium on Numerical Analysis (Plovdiv, August 13–17, 1993)*, pages 83–92. VSP, International Science Publishers, Utrecht, The Netherlands, 1994. ISBN 90-6764-152-9. Proceedings of the Second International Colloquium on Numerical Analysis.

Hemker:1995:UDC

[HS95] P. W. Hemker and G. I. Shishkin. The use of defect correction for the solution of parabolic singular perturbation problems. In *Abstracts of the International Conference on Advanced Mathematics, V. Computations and Applications*, pages 135–136. ????, ????, 1995. Novosibirsk, June 20–24.

Hemker:2001:RFF

[HS01] P. W. Hemker and F. Sprengel. On the representation of functions and finite difference operators on adaptive dyadic grids. *Computational Methods in Applied Mathematics*, 1(3): 222–241, 2001. ISSN 1609-4840 (print), 1609-9389 (electronic).

Hemker:1980:CSA

[HSd80] P. W. Hemker, H. Schippers, and P. M. de Zeeuw. Comparing some aspects of two codes for two-point boundary-value problems. Technical Report NW 98, Mathematical Centre, Amsterdam, The Netherlands, 1980.

Hemker:1997:USH

[HSS97a] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. ϵ-uniform schemes with high-order time-accuracy for parabolic singular

perturbation problems. *IMA Journal of Numerical Analysis*, submitted, 1997. CODEN IJNADH. ISSN 0272-4979 (print), 1464-3642 (electronic).

Hemker:1997:DMA

[HSS97b] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. On discrete methods arising in the numerical solution of singularly perturbed convection-diffusion problems, 1997.

Hemker:1997:UDC

[HSS97c] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. The use of defect correction for the solution of parabolic singular perturbation problems. *Zeitschrift für Angewandte Mathematik und Mechanik*, 76(1):59–74, 1997. CODEN ZAMMAX. ISSN 0044-2267 (print), 1521-4001 (electronic).

Hemker:1998:DCM

[HSS98] Pieter W. Hemker, Grigorii I. Shishkin, and Lidia P. Shishkina. A defect correction method for parabolic singular perturbation problems on a rectangle. In *Second International Conference "Finite-Difference Methods: Theory and Application", Vol. 2 (Minsk, 1998)*, pages 30–34. Natl. Acad. Sci. Belarus Inst. Math., Minsk, 1998.

Hemker:1999:UDC

[HSS99a] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. An ϵ-uniform defect-correction method for a parabolic convection-diffusion problem. In *Recent advances in numerical methods and applications, II (Sofia, 1998)*, pages 521–529. World Sci. Publ., River Edge, NJ, 1999.

Hemker:1999:NSN

[HSS99b] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. The numerical solution of a Neumann problem for parabolic singularly perturbed equations with high-order time accuracy. In *Recent advances in numerical methods and applications, II (Sofia, 1998)*, pages 27–39. World Sci. Publ., River Edge, NJ, 1999.

Hemker:2000:USH

[HSS00] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. ϵ-uniform schemes with high-order time-accuracy for parabolic singular perturbation problems. *IMA Journal of Numerical Analysis*, 20(1):99–121, January 2000. CODEN IJNADH. ISSN 0272-4979 (print), 1464-3642 (electronic). URL `http://www3.oup.co.uk/imanum/hdb/Volume_20/Issue_01/200099.sgm.abs.html`; `http://www3.oup.co.uk/imanum/hdb/Volume_20/Issue_01/pdf/200099.pdf`.

Hemker:2001:HOT

[HSS01a] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. High-order time-accurate parallel schemes for parabolic singularly perturbed problems with convection. *Computing: Archiv für informatik und numerik*, 66(2):139–161, 2001. CODEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic). URL `http://link.springer-ny.com/link/service/journals/00607/bibs/1066002/10660139.htm`; `http://link.springer-ny.com/link/service/journals/00607/papers/1066002/10660139.pdf`. Archives for scientific computing. Numerical methods for transport-dominated and related problems (Magdeburg, 1999).

Hemker:2001:APC

[HSS01b] Pieter W. Hemker, Grigorii I. Shishkin, and Lidia P. Shishkina. Acceleration by parallel computations of solving high-order time-accurate difference schemes for singularly perturbed convection-diffusion problems. In *Numerical analysis and its applications (Rousse, 2000)*, volume 1988 of *Lecture Notes in Comput. Sci.*, pages 393–401. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2001.

Hemker:2002:DCH

[HSS02a] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. Defect correction high-order accurate schemes for parabolic singularly perturbed convection-diffusion problems. In *International Conference on Computational Mathematics. Part I, II*, pages 454–459. ICM&MG Publishing, Novosibirsk, Russia, 2002.

Hemker:2002:HOTb

[HSS02b] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. High-order time-accuracy schemes for parabolic singular perturbation problems with convection. *Russian journal of numerical analysis and mathematical modelling*, 17(1):1–24, 2002. CODEN RJNMEH. ISSN 0927-6467 (print), 1569-3988 (electronic).

Hemker:2002:HOTa

[HSS02c] Pieter W. Hemker, Grigorii I. Shishkin, and Lidia P. Shishkina. High-order time-accurate schemes for singularly perturbed parabolic convection-diffusion problems with Robin boundary conditions. *Computational Methods in Applied Mathematics*, 2(1):3–25, 2002. ISSN 1609-4840 (print), 1609-9389 (electronic).

Hemker:2003:HOT

[HSS03a] P. W. Hemker, G. I. Shishkin, and L. P. Shishkina. High-order time-accurate schemes for parabolic singular perturbation convection-diffusion prob-

lems with Robin boundary conditions. *Mat. Model.*, 15(8):99–112, 2003. ISSN 0234-0879.

Hemker:2003:NDC

[HSS03b] Pieter W. Hemker, Grigorii I. Shishkin, and Lidia P. Shishkina. Novel direct-correction high-order, in space and time, accurate schemes for parabolic singularly perturbed convection-diffusion problems. *Computational Methods in Applied Mathematics*, 3(3):387–404 (electronic), 2003. ISSN 1609-4840 (print), 1609-9389 (electronic). Dedicated to John J. H. Miller on the occasion of his 65th birthday.

Hemker:2002:PUN

[HST02] P. W. Hemker, G. I. Shishkin, and I. V. Tselishcheva. Parameter-uniform numerical methods for a class of quasilinear singularly perturbed convection-diffusion equations in a composed domain. In *International Conference on Computational Mathematics. Part I, II*, pages 460–466. ICM&MG Publishing, Novosibirsk, Russia, 2002.

Hemker:1990:BDS

[HvdME90] P. W. Hemker, H. T. M. van der Maarel, and C. T. H. Everaars. BASIS: A data structure for adaptive multigrid computations. Technical Report NM-R9014, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1990.

Hemker:2004:FTLa

[HvR04] P. W. Hemker and M. H. van Raalte. Fourier two-level analysis for higher dimensional discontinuous Galerkin discretisation. *Computing and Visualization in Science*, 7(3–4):159–172, 2004. ISSN 1432-9360 (print), 1433-0369 (electronic).

Hemker:1979:PRN

[HW79] P. W. Hemker and D. T. Winter. A preliminary report on numerical operators in ALGOL 68. Technical Report NW 66, Mathematical Centre, Amsterdam, The Netherlands, 1979.

Hemker:1994:CM

[HW94a] P. W. Hemker and P. Wesseling, editors. *Contributions to Multigrid*, volume 103 of *CWI Tract Series*. Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1994.

Hemker:1994:MMI

[HW94b] P. W. Hemker and P. Wesseling, editors. *Multigrid methods IV*, volume 116 of *International Series of Numerical Mathematics*. Birkhäuser Verlag, Basel, 1994. Proceedings of the Fourth European Multigrid Conference, held in Amsterdam, July 6–9, 1993.

Hemker:1984:PVCa

[HWD84] P. W. Hemker, P. Wesseling, and P. M. De Zeeuw. A portable vector-code for autonomous multigrid modules. In B. Enquist and T. Smedsass, editors, *Proc. IFIP-Conference on PDE Software: Modules, Interfaces and Systems*, pages 29–40. North-Holland, Amsterdam, The Netherlands, 1984.

Koren:1988:LGS

[KdH88] B. Koren, P. M. de Zeeuw, and P. W. Hemker. Line Gauss–Seidel relaxation and multigrid for steady, two-dimensional flow computations. Technical Report NM-N8803, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1988.

Koren:1991:DDDa

[KH91a] B. Koren and P. W. Hemker. Damped, direction dependent multigrid for hypersonic flow computations. *Applied Numerical Mathematics: Transactions of IMACS*, 7(4):309–328, 1991. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Koren:1991:EMC

[KH91b] B. Koren and P. W. Hemker. Efficient multigrid computation of steady hypersonic flows. In *Computational methods in hypersonic aerodynamics*, volume 9 of *Fluid Mech. Appl.*, pages 203–231. Kluwer Academic Publishers Group, Norwell, MA, USA, and Dordrecht, The Netherlands, 1991.

Koren:1991:MDUa

[KH91c] B. Koren and P. W. Hemker. Multi-dimensional upwind schemes, multigrid and defect correction for accurate and efficient Euler flow computations. In W. Berry and B. Battrick, editors, *Aerodynamics for Space Vehicles*, pages 129–134. European Space Agency, ESTEC, Noordwijk, The Netherlands, 1991.

Koren:1992:EMC

[KH92a] B. Koren and P. W. Hemker. Efficient multigrid computation of steady hypersonic flows. In T. K. S. Murthy, editor, *Computational Methods in Hypersonic Aerodynamics*, pages 203–231. Kluwer Academic Publishers Group, Norwell, MA, USA, and Dordrecht, The Netherlands, 1992.

Koren:1992:MUM

[KH92b] B. Koren and P. W. Hemker. Multi-D upwinding and multigridding for steady Euler flow computations. In J. B. Vos, A. Rizzi, and I. L. Ryhming, editors, *Proceedings of the Ninth GAMM-Conference on Numerical Methods in Fluid Mechanics (Lausanne, 1991)*, volume 35 of *Notes on Numerical Methods in Fluid Mechanics*, pages 89–98. Friedrich

Vieweg und Sohn, Braunschweig, Germany, 1992.

Koren:1997:GTS

[KH97] B. Koren and P. W. Hemker. Godunov-type schemes, sparse grids and 3D CFD. *Journal of computational physics*, 137(??), ???? 1997. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). To appear.

Koren:1997:SCT

[KHd97] B. Koren, P. W. Hemker, and P. M. de Zeeuw. Semi-coarsening in three directions for Euler-flow computations in three dimensions. In *Euler and Navier–Stokes Solvers Using Multi-Dimensional Upwind Schemes and Multigrid Acceleration*, volume 57 of *Notes on Numerical Fluid Mechanics*, pages 547–567. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1997.

Koren:1997:MSC

[KHE97] B. Koren, P. W. Hemker, and C. T. H. Everaars. Multiple semi-coarsened multigrid for 3D CFD. *AIAA paper*, 97(2029), 1997. CODEN AAPRAQ. ISSN 0146-3705.

Khemker:2004:HOA

[KSS04] P. V. Khemker, G. I. Shishkin, and L. P. Shishkina. High-order accuracy decomposition of Richardson's method for a singularly perturbed elliptic reaction-diffusion equation. *Zh. Vychisl. Mat. Mat. Fiz.*, 44(2): 329–337, 2004. ISSN 0044-4669.

Koren:2003:FSE

[KvBH+03] B. Koren, E. H. van Brummelen, P. W. Hemker, B. van Leer, and M. R. Lewis. Fix for solution errors near interfaces in two-fluid flow computations. In *Computational fluid dynamics, 2002 (Sydney)*, pages 523–528. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2003.

Molenaar:1990:MASa

[MH90] J. Molenaar and P. W. Hemker. A multigrid approach for the solution of the 2D semiconductor equations. *Impact Comput. Sci. Eng.*, 2:219–243, 1990. CODEN ICOEEK. ISSN 0899-8248 (print), 1557-7678 (electronic).

Noordmans:1997:CRS

[NH97] J. Noordmans and P. W. Hemker. Convergence results for 3D sparse grid approaches. In *PRISM'97, Proceedings of the Conference on Preconditioned Iterative Solution Methods for Large Scale Problems in Scientific Computations*, pages 11–22. Nijmegen University, Nijmegen, The Netherlands, 1997.

Noordmans:1998:CRS

[NH98] J. Noordmans and P. W. Hemker. Convergence results for 3D sparse grid approaches. *Numerical Linear*

Algebra with Applications, 5 (5):363–376 (1999), September/October 1998. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). Special Issue: PRISM 97 (Nijmegen).

Noordmans:2000:AAS

[NH00] J. Noordmans and P. W. Hemker. Application of an adaptive sparse-grid technique to a model singular perturbation problem. *Computing: Archiv für informatik und numerik*, 65(4):357–378, 2000. CODEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic).

Polak:1981:MPC

[PWBH81] S. J. Polak, A. Wachters, Th. Beelen, and P. W. Hemker. A mesh-parameter continuation method. In M. H. Schultz, editor, *Elliptic Problem Solvers*, pages 383–390. Academic Press, New York, NY, USA, 1981.

Rispens:2011:LFA

[RTH+11] Theo Rispens, Henk Te Velthuis, Piet Hemker, Han Speijer, Wim Hermens, and Lucien Aarden. Label-free assessment of high-affinity antibody-antigen binding constants. Comparison of bioassay, SPR, and PEIA-ellipsometry. *Journal of Immunological Methods*, 365(1–2):50–57, February 2011. ISSN 0022-1759.

Shishkin:1997:NMF

[SSH97] G. I. Shishkin, L. P. Shishkina, and P. W. Hemker. A numerical method with floating meshes for singularly perturbed problems with a concentrated disturbance in the initial data. *CWI Quarterly*, 10(3-4):317–336, 1997. ISSN 0922-5366. International Workshop on the Numerical Solution of Thin-layer Phenomena (Amsterdam, 1997).

Shishkin:2004:CSP

[SSH04] Grigory I. Shishkin, Lidia P. Shishkina, and Pieter W. Hemker. A class of singularly perturbed convection-diffusion problems with a moving interior layer. An a posteriori adaptive mesh technique. *Computational Methods in Applied Mathematics*, 4(1):105–127 (electronic), 2004. ISSN 1609-4840 (print), 1609-9389 (electronic).

Thoolen:1991:AMC

[TH91] P. M. C. Thoolen and P. W. Hemker. Approximation methods for n-component solute transport and ion-exchange. Technical Report Report 91-09, Dept. of Mathematics, Univ. of Amsterdam, 1991.

Thoolen:1994:AMC

[TH94] P. M. C. Thoolen and P. W. Hemker. Approximate methods for n-component solute transport and ion-exchange.

Journal of Computational and Applied Mathematics, 53(2): 275–290, 1994. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Maarel:1990:EAE

[vdMHE90] H. T. M. van der Maarel, P. W. Hemker, and C. T. H. Everaars. EULER: An adaptive Euler code. Technical Report NM-R9015, Centrum voor Wiskunde en Informatica, P. O. Box 4079, 1009 AB Amsterdam, The Netherlands, 1990.

vanderMaarel:1993:ASA

[vdMHKM93] H. T. M. van der Maarel, P. W. Hemker, B. Koren, and J. A. Michelsen. Application of a solution-adaptive multigrid method to the Euler equations. *CWI Quarterly*, 6(1):49–75, 1993. ISSN 0922-5366.

Domselaar:1975:NPE

[vH75] B. van Domselaar and P. W. Hemker. Nonlinear parameter estimation in initial value problems. Technical Report NW 18, MC, 1975.

VanderMaarel:1995:SAF

[VH95] H. T. M. Van der Maarel and P. W. Hemker. Structured adaptive finite-volume multigrid for compressible flows. In W. Hackbusch and G. Wittum, editors, *Fast Solvers for Flow Problems (Kiel, 1994)*, volume 49 of *Notes on Numerical Fluid Mechanics*, pages 14–37. Friedrich Vieweg und Sohn, Braunschweig, Germany, 1995.

Vasileva:2006:AMS

[VKH06] Daniela Vasileva, Anton Kuut, and Pieter W. Hemker. An adaptive multigrid strategy for convection-diffusion problems. In *Large-scale scientific computing*, volume 3743 of *Lecture Notes in Comput. Sci.*, pages 138–145. Springer-Verlag, Berlin, Germany /Heidelberg, Germany / London, UK / etc., 2006.

vanRaalte:2005:TLM

[vRH05] M. H. van Raalte and P. W. Hemker. Two-level multigrid analysis for the convection-diffusion equation discretized by a discontinuous Galerkin method. *Numerical Linear Algebra with Applications*, 12(5–6):563–584, June/August 2005. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Wagenvoord:2006:LSC

[WHH06] R. Wagenvoord, P. W. Hemker, and H. C. Hemker. The limits of simulation of the clotting system. *Journal of Thrombosis and Haemostasis: JTH*, 4(6): 1331–1338, June 2006. ISSN 1538-7836 (print), 1538-7933 (electronic).

Wesseling:2008:ESI

[WHO08] Pieter Wesseling, Pieter Hemker, and Cornelis Oosterlee. Editorial [Special issue devoted

to the 8th European Multigrid Conference (EMG)]. *Computing and Visualization in Science*, 11(1):1, 2008. ISSN 1432-9360 (print), 1433-0369 (electronic). Held in Scheveningen, September 27–30, 2005.