LIST OF PUBLICATIONS

Vlastislav Červený

I/ Books: 3
II/ Chapters in books: 5
III/ Papers in reviewed periodicals: 119
IV/ Lecture notes: 16
V/ Papers in conference proceedings and non-reviewed journals: 73
VI/ Research reports. Papers in research reports: 118

I/ Books: 3

Červený, V., and Ravindra, R., 1971. Theory of seismic head waves. Toronto University Press, Toronto, 312 pp.

Červený, V., Molotkov, I.A., and Pšenčík, I. 1977. Ray method in seismology. Univerzita Karlova, Praha, 214 pp.
Translated to Chinese by Liu Fu-tian. The Chinese translation published by Academia Sinica Press, Beijing 1986, 208 pp.

Červený, V., 2001. Seismic ray theory. Cambridge Univ. Press, Cambridge, 713 pp.

II/ Chapters in books: 5

Červený, V., 1985. The application of ray tracing to the numerical modelling of seismic wavefields in complex media. In the book series: "Handbook of Geophysical Exploration, Section I: Seismic Exploration (K. Helbig, S. Treitel, eds.)", the volume on "Seismic Shear Waves, Part A: Theory (G. Dohr, ed.)", 1–121. Geophysical Press, London.

Červený, V., 1987. Ray tracing algorithms in three-dimensional laterally varying layered structures. In: "Tomography in Seismology and Exploration Seismics (G. Nolet, ed.)", 99–133. Reidel, Dordrecht.

Červený, V., Klimeš, L., and Pšenčík, I., 1988. Complete seismic ray tracing in 3-D structures. In: "Seismological algorithms (D.J. Doornbos, ed.)", 89–168. Academic Press, New York.

Červený, V., 1989. Seismic ray theory. In: "Encyclopedia of Geophysics (D.E. James, ed.)", 1098–1108. Van Nostrand Reinhold, Stroudsburg.

Červený, V., Klimeš, L., and Pšenčík, I., 2007. Seismic ray method: Recent developments. In the book series: Advances in Geophysics, vol. 48 (R. Dmowska, ed.), the volume on Advances in Wave Propagation in Heterogeneous Earth (R.-S.Wu, V. Maupin, eds.), 1–126. Elsevier-Academic Press, New York. Also published in the journal Advances in Geophysics **48**, 1–126.

III/ **Papers, in reviewed periodicals: 119**

Červený, V., 1957. The reflection of spherical elastic waves at a plane boundary. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 44, Geofyzikální sborník **4**, 343–366. NČSAV, Praha.

Červený, V., 1957. On the amplitudes of head waves. Studia geoph. et geod. **1**, 256–283 (in Russian).

Červený, V., 1959. Über die an "schwachen" Grenzflächen entstehenden Kopfwellen. Czechosl. Journ. Phys. **9**, 101–111.

Červený, V., 1959. On the reflection of spherical waves at a plane interface with refractive index near to one. I. Studia geoph. et geod. **3**, 116–134.

Červený, V., 1960. On the amplitudes of reflected harmonic waves at a critical point. Acta Univ. Carolinae - Mathematica, No. 2, 33–44 (in Czech).

Červený, V., 1960. On the reflection of spherical waves at a plane interface with refractive index near to one. II. Studia geoph. et geod. **4**, 20–41.

Červený, V., and Hron, F., 1961. Reflection coefficients of spherical waves. Studia geoph. et geod. **5**, 122–132.

Červený, V., 1961. The amplitude curves of reflected harmonic waves around the critical point. Studia geoph. et geod. **5**, 319–351.

Červený, V., 1962. On the length of the interference zone of a reflected and head wave beyond the critical point and on the amplitudes of head waves. Studia geoph. et geod. **6**, 49–64.

Červený, V., 1962. On some interference properties of reflected and head waves generated by a spherical wave incident at a thin layer. Acta Univ. Carolinae - Mathematica, No. 2, 1–23 (in Czech).

Červený, V., 1962. On the position of the maximum of amplitude curves of reflected waves. Studia geoph. et geod. **6**, 215–234.

Červený, V., 1963. On reflected and head waves around the first and the second critical point. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 181, Geofyzikální sborník **10**, 43–94. NČSAV, Praha.

Červený, V., 1963. Determination of the position of the critical point from the amplitude curves of reflected waves. Studia geoph. et geod. **7**, 286–287 (in Russian).

Červený, V., 1963. Simplified relations for amplitudes of spherical compressional harmonic waves reflected from a plane interface. Studia geoph. et geod. **7**, 337–352.

Červený, V., Hron, F., and Novák, B., 1964. Reflection coefficients of plane waves of PP–type for weak interfaces. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 181, Geofyzikální sborník **11**, 79–142. NČSAV, Praha.

Červený, V., and Novák, B., 1964. Theoretical amplitude curves of waves reflected from Mohorovičic' discontinuity for some models of one-layer Earth's crust. Studia geoph. et geod. **8**, 34–44.

Červený, V., and Yepinat'eva, A.M., 1965. Reflected waves in the region of the second critical point. Studia geoph. et geod. **9**, 259–271 (in Russian).

Červený, V., Yepinat'eva, A.M., and Kosminskaya, I.P., 1965. Pecularities of reflected waves in critical regions. Izv. Akad. Nauk SSSR, Fizika Zemli, No. 8, 12–20 (in Russian).

Červený, V., 1966. The dynamic properties of reflected and head waves around the critical point. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 221, Geofyzikální sborník **13**, 135–245. Academia, Praha.

Červený, V., and Janský, J., 1966. Theoretical time-distance curves of seismic waves in inhomogeneous one-layer Earth's crust. Acta Univ. Carolinae - Math. et Phys., No. 1, 13–79 (in Czech).

Červený, V., 1966. Computation of wave fields in seismic models and in real media. Studia geoph. et geod. **10**, 259–270.

Červený, V., 1966. On dynamic properties of reflected and head waves in the n-layered Earth's crust. Geophys. J.R. astr. Soc. **11**, 139–147.

Červený, V., 1967. On some kinematic and dynamic properties of reflected and head waves in the case of layered overburden. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 244, Geofyzikální sborník **14**, 105–179. Academia, Praha.

Červený, V., 1967. The amplitude-distance curves of waves reflected on a plane interface for different frequency ranges. Geophys. J.R. astr. Soc. **13**, 187–196.

Červený, V., and Janský, J., 1967. The amplitude curves of seismic waves at short epicentral distances. Acta Univ. Carolinae - Math. et Phys., No. 1, 15–21.

Červený, V., and Novotný, O., 1967. The theory of seismic waves. Studia geoph. et geod. **11**, 344–347.

Červený, V., and Yepinat'eva, A.M., 1967. Influence of the stratification of the overburden on the amplitudes of reflected and head waves. Acta Univ. Carolinae - Math. et Phys., No. 1, 55–88 (in Russian).

Červený, V., 1968. The theory of reflected and head waves in the case of a layered overburden. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 269, Geofyzikální sborník **15**, 133–180. Academia, Praha.

Červený, V., and Mádr, I., 1968. Amplitude curves of reflected and head waves for some simple models of medium. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 270, Geofyzikální sborník **15**, 181–203. Academia, Praha.

Červený, V., and Yepinat'eva, A.M., 1968. Amplitudes of reflected and head waves in the case of a layered overburden. Izv. Akad. Nauk, SSSR, Fizika Zemli, No. 3, 19–32 (in Russian).

Červený, V., Kozák, J., and Pšenčík, I., 1971. Refraction of elastic waves into a medium of lower velocity - Pseudospherical waves. Pure and Applied Geophysics **92**, 115–132.

Červený, V., 1972. Seismic rays and ray intensities in inhomogeneous anisotropic media. Geophys. J.R. astr. Soc. **29**, 1–13.

Červený, V., and Pšenčík, I., 1972. Rays and travel-time curves in inhomogeneous anisotropic media. Z. Geophys. **38**, 565–577.

Červený, V., and Pšenčík, I., 1972. Computation of diffracted rays in inhomogeneous media with curved interfaces. Studia geoph. et geod. **16**, 356–366.

Červený, V., and Kozák, J., 1972. Experimental evidence and investigation of pseudospherical waves. Z. Geophys. **38**, 617–626.

Červený, V., and Zahradník, J., 1972. Amplitude-distance curves of seismic body waves in the neighbourhood of critical points and caustics. A comparison. Z. Geophys. **38**, 499–516.

Červený, V., 1972. Theory of elastic wave propagation in inhomogeneous media. Z. Geophys. **38**, 469–479.

Červený, V., 1974. Reflection and transmission coefficients for transition layers. Studia geoph. et geod. **18**, 59–68.

Červený, V., and Kozák, J., 1974. Head waves from curved interfaces. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 370, Geofyzikální sborník **20**, 203–216. Academia, Praha.

Červený, V., Langer, J., and Pšenčík, I., 1974. Computation of geometrical spreading of seismic body waves in laterally inhomogeneous media with curved interfaces. Geophys. J.R. astr. Soc. **38**, 9–19.

Červený, V., and Zahradník, J., 1975. Hilbert transform and its applications in geophysics. Acta Univ. Carolinae - Math. et Phys., No. 1, 67–81.

Červený, V., 1975. Determination of the gradient of seismic wave velocity in the lower crust from travel-time curves of waves reflected from the Mohorovičic' discontinuity. Studia geoph. et geod. **19**, 379–382.

Červený, V., and Pšenčík, I., 1975. Geometrical spreading of seismic body waves in laterally inhomogeneous media with curved interfaces of the second order. Studia geoph. et geod. **19**, 298–299.

Červený, V., 1976. Determination of seismic interface from the travel-time curve of a reflected wave in a vertically inhomogeneous medium. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 418, Geofyzikální sborník **22**, 117–151. Academia, Praha.

Červený, V., 1976. Approximate expressions for the Hilbert transform of a certain class of functions and their applications in the ray theory of seismic waves. Studia geoph. et geod. **20**, 125–132.

Červený, V., 1976. Ray amplitudes in a three-dimensional inhomogeneous medium. Studia geoph. et geod. **20**, 401–404.

Červený, V., and Kozák, J., 1976. Methods and certain results of theoretical and experimental investigations of seismic body wave propagation in Czechoslovakia. Acta Univ. Carolinae, Math. et Phys. **17**, 29–48 (in Russian).

Červený, V., Pšenčík, I., and Zahradník, J., 1976. Seismic waves in laterally inhomogeneous media with curved interfaces. Gerlands Beitr. Geophysik **85**, 57–70.

Molotkov, L.A., Červený, V., and Novotný, O., 1976. Low-frequency and high-frequency expressions for the reflection and transmission coefficients of seismic waves for transition layers. Studia geoph. et geod. **20**, 219–235.

Červený, V., 1977. Oscillatory character of amplitude curves of multiply reflected waves at large epicentral distances. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 434, Geofyzikální sborník **23**, 77–89. Academia, Praha.

Červený, V., and Pretlová, V., 1977. Computation of ray amplitudes of seismic body waves in vertically inhomogeneous media. Studia geoph. et geod. **21**, 248–255.

Červený, V., and Pšenčík, I., 1978. Use of computers in seismic investigation of deep structures. J. Geol. Sci. - Applied Geophysics **15**, 73–96.

Beránek, B., Červený, V., Konířová, L., Pšenčík, I., and Zounková, M., 1979. Interpretational methods in seismic investigation of deep structures. J. Geol. Sci. - Applied Geophysics **16**, 63–90.

Širůček, I., Pellant, K., Fabián, Z., and Červený, V., 1979. Determination of input data for synthetic seismograms. J. Geol. Sci. - Applied Geophysics **16**, 91–102 (in Czech).

Červený, V., 1979. Ray theoretical seismograms for laterally inhomogeneous structures. J. Geophys. **46**, 335–342.

Červený, V., 1979. Accuracy of ray theoretical seismograms. J. Geophys. **46**, 135–149.

Červený, V., and Pšenčík, I., 1979. Ray amplitudes of seismic body waves in laterally inhomogeneous media. Geophys. J.R. astr. Soc. **57**, 91–106.

Červený, V., 1980. A new approximation of the velocity-depth distribution and its application to the computation of seismic wave fields. Studia geoph. et geod. **24**, 17–27.

Novotný, O., Červený, V., and Molotkov, L.A., 1980. Numerical properties of low-frequency expansion for the reflection and transmission coefficients from transition layer. Studia geoph. et geod. **24**, 124–130.

Červený, V., Novotný, O., Plešinger, A., and Plomerová, J., 1980. Structure of the Earth's crust in Southwest Czechoslovakia from spectral ratios of long-period P waves (Preliminary results). Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 482, Geofyzikální sborník **25**, 113–129. Academia, Praha.

Červený, V., and Hron, F., 1980. The ray series method and dynamic ray tracing system for three-dimensional inhomogeneous media. Bull. Seism. Soc. Amer. **70**, 47–77.

Červený, V., and Frangié, A.B., 1980. Elementary seismograms of seismic body waves in dissipative media. Studia geoph. et geod. **24**, 365–372.

Zahradník, J., Červený, V., and Barták, V., 1981. Influence of geological factors on seismic ground motions. (Seismic microzoning of Prague). Studia geoph. et geod. **25**, 343–355.

Janský, J., and Červený, V., 1981. Computation of ray integrals and ray amplitudes in radially symmetric media. Studia geoph. et geod. **25**, 288–292.

Červený, V., Popov, M.M., and Pšenčík, I., 1982. Computation of wave fields in inhomogeneous media - Gaussian beam approach. Geophys. J.R. astr. Soc. **70**, 109–128.

Červený, V., 1982. Expansion of a plane wave into Gaussian beams. Studia geoph. et geod. **26**, 120–131.

Červený, V., and Frangié, A.B., 1982. Effects of causal absorption on seismic body waves. Studia geoph. et geod. **26**, 238–253.

Červený, V., 1982. Direct and inverse kinematic problems for inhomogeneous anisotropic media - linearization approach. Cont. Geophys. Inst. Slov. Acad. Sci. **13**, 127–133.

Červený, V., and Jech, J., 1982. Linearized solutions of kinematic problems of seismic body waves in inhomogeneous slightly anisotropic media. J. Geophys. **51**, 96–104.

Červený, V., Molotkov, I.A., and Pšenčík, I., 1982. Space-time ray method for seismic wave fields. Studia geoph. et geod. **26**, 342–351.

Červený, V., 1982. Approximate evaluation of elementary seismograms for modulated source-time functions. Trav. Inst. Géophys. Acad. Tchécosl. Sci. No. 536, Geofyzikální sborník **28**, 9–14. Academia, Praha.

Červený, V., and Janský, J., 1983. Ray amplitudes of seismic body waves in inhomogeneous radially symmetric media. Studia geoph. et geod. **27**, 9–18.

Červený, V., and Pšenčík, I., 1983. Gaussian beams in two-dimensional elastic inhomogeneous media. Geophys. J.R. astr. Soc. **72**, 417–433.

Červený, V., 1983. Synthetic body wave seismograms for laterally inhomogeneous media by the Gaussian beam method. Geophys. J.R. astr. Soc. **73**, 389–426.

Červený, V., and Pšenčík, I., 1983. Gaussian beams and paraxial ray approximation in three-dimensional elastic inhomogeneous media. J. Geophys. **53**, 1–15.

Červený, V., and Firbas, P., 1984. Numerical modelling and inversion of travel-time fields of seismic body waves in inhomogeneous anisotropic media. Geophys. J.R. astr. Soc. **76**, 41–51.

Konopásková, J., and Červený, V., 1984. Numerical modelling of time-harmonic seismic wave fields in simple structures by the Gaussian beam method. Part I. Studia geoph. et geod. **28**, 19–35.

Konopásková, J., and Červený, V., 1984. Numerical modelling of time-harmonic seismic wave fields in simple structures by the Gaussian beam method. Part II. Studia geoph. et geod. **28**, 113–128.

Červený, V., and Pšenčík, I., 1984. Gaussian beams in two-dimensional laterally varying layered structures. Geophys. J.R. astr. Soc. **78**, 65–91.

Červený, V., and Klimeš, L., 1984. Synthetic body wave seismograms for three-dimensional laterally varying media. Geophys. J.R. astr. Soc. **79**, 119–133.

Červený, V., Klimeš, L., and Pšenčík, I., 1984. Paraxial ray approximation in the computation of seismic wave fields in inhomogeneous media. Geophys. J.R. astr. Soc. **79**, 89–104.

Červený, V., and Janský, J., 1985. Fast computation of ray synthetic seismograms in vertically inhomogeneous media. Studia geoph. et geod. **29**, 49–67.

Červený, V., 1985. Ray synthetic seismograms for complex two-dimensional and three-dimensional structures. J. Geophys. **58**, 2–26.

Červený, V., 1985. Gaussian beam synthetic seismograms. J. Geophys. **58**, 44–72.

Červený, V., Klimeš, L., Pšenčík, I., and Pleinerová, J., 1987. High-frequency radiation from earthquake sources for laterally varying layered structures. Geophys. J.R. astr. Soc. **88**, 43–79.

Töpferová, J., and Červený, V., 1987. Numerical modelling of seismic wave fields in models containing thin layers. Studia geoph. et geod. **31**, 344–358.

Červený, V., Klimeš, L., and Pšenčík, I., 1988. Applications of the dynamic ray tracing. Physics of the Earth and Planetary Interiors **51**, 25–35.

Červený, V., 1989. Synthetic body wave seismograms for laterally varying media containing thin transition layers. Geophys. J. Int. **99**, 331–349.

Červený, V., 1989. Ray tracing in factorized anisotropic inhomogeneous media. Geophys. J. Int. **99**, 91–100.

Carrion, P., and Červený, V., 1990. Imaging of discontinuities in nonlinear 3-D inversion. Geophys. Res. Letters **17**, 1509–1511.

Červený, V., and Simões-Filho, I.A., 1991. The travel-time perturbations for seismic body waves in factorized anisotropic inhomogeneous media. Geophys. J. Int. **107**, 219–229.

Červený, V., and de Andrade, F.C.M., 1992. Influence of a near-surface structure on seismic wave fields recorded at the Earth's surface. J. Seismic Exploration **1**, 107–116, 1992.

Červený, V., and Aranha, P., 1992. Tunneling of seismic body waves through thin high-velocity layers in complex structures. Studia geoph. et geod. **36**, 115–138.

Červený, V., and Coppoli D.M., A., 1992. Ray-Born synthetic seismograms for complex structures containing scatterers. J. Seismic Exploration **1**, 191–206.

Červený, V., and Soares, J.E.P., 1992. Fresnel volume ray tracing. Geophysics **57**, 902–915.

Zedník, J., Janský, J., and Červený, V., 1993. Synthetic seismograms in radially inhomogeneous media for ISOP applications. Computers & Geosciences **19**, 183-187.

Červený, V., and de Castro, M.A., 1993. Application of dynamic ray tracing in the 3-D inversion of seismic reflection data. Geophys. J. Int. **113**, 776-779.

Červený, V., and Janský, J., 1994. P and PKP ray amplitude-distance curves. Acta Geophys. Polonica **42**, 247–272.

Kvasnička, M., and Červený, V., 1994. Fresnel volumes and Fresnel zones in complex laterally varying structures. J. Seismic Exploration **3**, 215–230.

Jílek, P., and Červený, V., 1996. Radiation patterns of point sources situated close to structural interfaces and to the Earth's surface. PAGEOPH **148**, 175–225.

Kvasnička, M., and Červený, V., 1996. Analytical expressions for Fresnel volumes and interface Fresnel zones of seismic body waves. Part 1: Direct and unconverted reflected waves. Studia geoph. et geod. **40**, 136–155.

Kvasnička, M., and Červený, V., 1996. Analytical expressions for Fresnel volumes and interface Fresnel zones of seismic body waves. Part 2: Transmitted and converted waves. Head waves. Studia geoph. et geod. **40**, 381–397.

Červený, V., 2002. Fermat's variational principle for anisotropic inhomogeneous media. Studia geoph. et geod. **46**, 567–588.

Červený, V., 2004. Inhomogeneous harmonic plane waves in viscoelastic anisotropic media. Studia geoph. et geod. **48**, 167–186.

Červený, V., and Pšenčík, I., 2005. Plane waves in viscoelastic anisotropic media - I. Theory. Geophys. J. Int. **161**, 197–212.

Červený, V., and Pšenčík, I., 2005. Plane waves in viscoelastic anisotropic media - II. Numerical examples. Geophys. J. Int. **161**, 213–228.

Červený, V., and Pšenčík, I., 2006. Energy flux in viscoelastic anisotropic media. Geophys. J. Int. **166**, 1299–1317.

Červený, V., and Pšenčík, I., 2006. Particle motion of plane waves in viscoelastic anisotropic media. Russ. Geol. Geophys. **47**, 551–562. Printed also in Russian language: Geologiya i Geofizika **47**, 23–33.

Červený, V., 2007. Reflection-transmission laws in viscoelastic anisotropic media. Studia geoph. et geod. **51**, 391–410.

Červený, V., 2007. A note on dynamic ray tracing in ray-centered coordinates in anisotropic inhomogeneous media. Studia geoph. et geod. **51**, 411–422.

Červený, V., and Pšenčík, I., 2007. Time-averaged and time-dependent energy-related quantities of waves propagating in inhomogeneous viscoelastic media. Geophys. J. Int. **170**, 1253–1261.

Moser, T.J., and Červený, V., 2007. Paraxial ray methods for anisotropic inhomogeneous media. Geophys. Prospecting **55**, 21–37.

Červený, V., and Moser, T.J., 2007. Ray propagator matrices in 3-D anisotropic inhomogeneous layered media. Geophys. J. Int. **168**, 593–604.

Červený, V., and Pšenčík, I., 2008. Weakly inhomogeneous plane waves in isotropic, weakly dissipative medium. Geophys. J. Int. **172**, 663–673.

Červený, V., Klimeš, L., and Pšenčík, I., 2007. Seismic ray method. Recent developments. Advances in Geophysics **48**, 1–126.

Červený, V., and Pšenčík, I., 2008. Quality factor Q in dissipative anisotropic media. Geophysics **73**, T63–T75.

Červený, V., and Moser, T.J., 2009. Paraxial ray methods in inhomogeneous anisotropic media. Initial conditions. Studia geoph. et geod. **53**, 199–214.

Červený, V., and Pšenčík, I., 2009. Perturbation Hamiltonians in heterogeneous anisotropic weakly dissipative media. Geophys. J. Int. **178**, 939–949.

Červený, V., and Pšenčík, I., 2010. Gaussian beams in inhomogeneous anisotropic layered structures. Geophys. J. Int. **180**, 798–812.

IV/ **Lecture Notes: 16**

Červený, V., 1976. Propagation of elastic waves. Charles University, Faculty of Mathematics and Physics, Prague, Czechoslovakia, 63 pp. (in Czech).

Červený, V., 1977. Fourier spectral analysis. Charles University, Faculty of Mathematics and Physics, Prague, Czechoslovakia, 87 pp. (in Czech).

Červený, V., 1978. Ray methods in seismology. Charles University, Faculty of Mathematics and Physics, Prague, Czechoslovakia, 192 pp. (in Czech).

Červený, V., 1981. Seismic wave fields in structurally complicated media. Ray and Gaussian beam approaches. Rijksuniversiteit Utrecht, Vening Meinesz Laboratorium, Utrecht, Netherlands, 102 pp.
Reprinted by State Seismological Bureau, Geophysical Prospecting Brigade, Zhengzhou, China, 1984
Translated to portuguese by J.W.C. Rosa, Universidade Federal Brasilia, Brazil.

Červený, V., 1983. Spectral analysis in geophysics I. SPN, Prague, Czechoslovakia, 114 pp. (in Czech).

Červený, V., 1984. Numerical modelling of high-frequency seismic wave fields in three-dimensional complex media. J.W. Goethe Univ., Inst. f. Meteorology u. Geophysik, Frankfurt a. M., Germany, 72 pp.

Červený, V., 1984. Ray synthetic seismograms for complex two-dimensional and three-dimensional structures. Ettore Majorana Center for Scientific Culture, International School of Applied Geophysics, 5th Course: Synthetic Seismograms: Generation and Use, Erice, Italy, 42 pp.

Červený, V., 1984. Gaussian beam synthetic seismograms. Ettore Majorana Center for Scientific Culture, International School of Applied Geophysics, 5th Course: Synthetic Seismograms: Generation and Use, Erice, Italy, 41 pp.

Červený, V., 1986. Seismic waves in anisotropic media. UNESCO-IAEA Autumn Course on Seismology, Sept. 1–Oct. 4, 1986, Internat. Centre for Theoretical Physics, Miramare-Trieste, Italy, 55 pp.

Červený, V., 1986. Seismic ray theory. UNESCO-IAEA Autumn Course on Seismology, Sept. 1–Oct. 4, 1986, Internat. Centre for Theoretical Physics, Miramare-Trieste, Italy, 153 pp.

Červený, V., 1987. Ray methods for three-dimensional seismic modelling. 10 day Continuing Education Course, Oct. 26–Nov. 6, 1987. University of Trondheim, NTH and Mobil Exploration Norway Inc., Trondheim, Norway, 830 pp.

Červený, V., 1990. Seismic waves in anisotropic media. Cursos Advançados em Exploração Geofísica 90, Petrobrás, Rio de Janeiro, Brazil, 120 pp.

Červený, V., 1991. Seismic Wave Fields in Complex Structures. Pre-Convention Course. 2nd Int. Congress of the Brazilian Geophysical Society, Salvador, Oct. 26, 1991, Brazilian Geophysical Society, Salvador, Brazil.

Červený, V., 1993. The wave phonomena in complex three-dimensional structures. Japan National Oil Corporation, Mihama-Ku, Japan, 410 pp.

Červený, V., 1994. Seismic wavefields in complex three-dimensional structures. National Central University, Chung-Li, Taiwan (2 volumes), 357 pp.

Červený, V., 1995. Seismic wavefields in three-dimensional isotropic and anisotropic structures. University of Trondheim, Division of Petroleum Engineering and Applied Geophysics, Trondheim, Norway, 540 pp.

Many other shorter lecture notes.

V/ **Papers in conference proceedings and non-reviewed journals: 73**

Červený, V., 1974. Theory of seismic body wave propagation. In: "Seismological Investigations on International Project Upper Mantle, Final Report, European Seismological Commission (E.F. Savarenskiy, ed.)", 7–35. Soviet Geophysical Committee, Moscow.

Červený, V., and Pěč, K., 1975. Seismic waves in inhomogeneous media - a review. In: "The XIIIth General Assembly of the European Seismological Commission (Part III)". Technical and Economical Studies, D Series, Geophysical Prospecting, 71–95. Institute of Geology and Geophysics, Buharest.

Beránek, B., Konířová, L., Zounková, M., Červený, V., and Pšenčík, I., 1975. On the use of computers in the interpretation of deep structures. In: "Výzkum hlubinné stavby geologické v Československu (Investigation of Deep Geological Structure of Czechoslovakia), Loučná 1975", 107–121. Geofyzika, N.E., Brno (in Czech).

Červený, V., 1975. Simple procedure for Fourier and Hilbert transforms. In: "Teorie a počítače v geofyzice (Theory and Computers in Geophysics), Loučná 1975", 178–187. Geofyzika, N.E., Brno (in Czech).

Červený, V., 1975. Inversion of geophysical data by the hedgehog method. In: "Teorie a počítače v geofyzice (Theory and Computers in Geophysics), Loučná 1975", 188–203. Geofyzika, N.E., Brno (in Czech).

Červený, V., 1975. Synthetic seismograms. In: "Teorie a počítače v geofyzice (Theory and Computers in Geophysics), Loučná 1975", 35–49. Geofyzika N.E., Brno (in Czech).

Červený, V., Novotný, O., Plešinger, A., and Plomerová, J., 1975. Determination of the structure of the Earth's crust and the Upper Mantle from the spectra of seismic body waves. In: "Teorie a počítače v geofyzice (Theory and Computers in Geophysics), Loučná 1975", 104–130. Geofyzika N.E., Brno (in Czech).

Červený, V., Pěč, K., and Pšenčík, I., 1975. Processing of geophysical data. Acta Polytechnica **4**, 137–146 (in Czech).

Červený, V., Pšenčík, I., Beránek, B., Konířová, L., and Zounková, M., 1975. Digital processing of seismic data. In: "6. celostátní konference čs. geofyz., (6th Conference of Czechosl. Geophysicists) Plzeň 1975", 93–104. Geofyzika N.E., Brno (in Czech).

Buben, J., and Červený, V., 1976. Interpretation of geophysical measurements. In: "Sborník referátů o spolupráci MFF UK s praxí (Cooperation of Faculty of Mathematics and Physics, Charles University, with industry), Praha 1976", 136–142. Univerzita Karlova, Praha (in Czech).

Červený, V., and Pretlová, V., 1977. Application of smoothed splines in the computation of ray amplitudes of seismic body waves. In: "Proc. XV. Assembly of European Seismological Commission, Kraków 1976". Publ. Inst.Géophys. Pol. Acad. Sc. A-4(115), 187–197. PWN, Warszawa - Lódź.

Červený, V., and Pšenčík, I., 1977. Ray theoretical seismograms for laterally varying layered structures. In: "Proc. XV. General Assembly of European Seismological Commission, Kraków 1976". Publ. Inst. Géophys. Pol. Acad. Sc. A-4(115), 173–185. PWN, Warszawa-Lódź.

Červený, V., Fuchs, K., Müller, G., and Zahradník, J., 1977. Theoretical seismograms for inhomogeneous elastic media. In: "Theory of diffraction and wave propagation III. VII All-Union Symposium on Diffraction and Wave Propagation, Rostow-on-Don, 1977", 381–385. Akad. Nauk SSSR, Moskva.

Vyskočil, V., and Červený, V., 1977. To the construction of three-dimensional geophysical models. In: "Současné problémy gravimetrie (Present problems of gravimetry), Liblice 1976", 307–328. Geofyzikální ústav ČSAV, Praha (in Czech).

Červený, V., 1978. Ray theoretical seismograms. In: "Geophysikalische Interpretationsmethoden. Sammelwerk des Symposiums der Arbeitsgruppe 1.7 KAPG, Bratislava, Mai 1974", 49–64. Veda, Bratislava.

Červený, V., and Holub, K., 1978. Theoretical and methodical investigations. In: "Strojenije zemnoj kory i verchnej mantii Central'noj i Vostočnoj Evropy (Structure of the Earth's crust and upper mantle of Central and Eastern Europe)", 246–247. Naukovaja Dumka, Kijev (in Russian).

Červený, V., and Pšenčík, I., 1979. Seismic wave fields in laterally inhomogeneous models of the Earth's crust and upper mantle. In: "Geodynamic Investigations in Czechoslovakia. Final Report", 112–117. Veda, Bratislava.

Červený, V., 1980. Interpretation of seismic waves in structurally complicated media. In: "Výzkum hlubinné stavby geologické v Československu (Investigation of Deep Geological Structure of Czechoslovakia), Liblice 1979", 137–144. Geofyzika N.E., Brno (in Czech).

Červený, V., 1980. Ray synthetic seismograms for the Earth's crust and the uppermost mantle. In: "Issledovaniye litosfery i astenosfery na dlinnych profilyach GSZ (Investigation of the lithosphere and asthenosphere along the long-range profiles), Jalta 1979", 193–217. Nauka, Moskva.

Červený, V., and Pšenčík, I., 1980. Approximate methods for the computation of seismic wave fields in laterally inhomogeneous media. In: "Materials of the Symposium on Shear Waves, Hamburg 1980". University of Hamburg, Hamburg.

Červený, V., and Zahradník, J., 1980. Computational methods in seismic microzoning and their practical applications. In: "7 celostátní konference čs. geofyziků (7th Conference of Czechosl. Geophysicists), Gottwaldov 1980", 31–35. Geofyzika N.E., Brno (in Czech).

Červený, V., Fuchs, K., Müller, G., and Zahradník, J., 1980. Theoretical seismograms for inhomogeneous media. In: "Problemy dinamicheskoy teorii rasprostraneniya seismicheskikh voln (Problems in the dynamic theory of the propagation of seismic waves)", Vol. 20, 84–109. Nauka, Leningrad (in Russian).

Červený, V., Pšenčík, I., and Zahradník, J., 1981. Theory of seismic waves. In: "Geophysical Syntheses in Czechoslovakia", 177–192. Veda, Bratislava.

Červený, V., Martinec, Z., Novotný, O., and Pěč, K., 1981. Determination of density from seismological data. In: "Současné problémy gravimetrie II (Present problems of gravimetry II), Zvíkovské Podhradí 1980", 23–42. Geofyzika N.E., Brno (in Czech).

Červený, V., 1981. Dynamic ray tracing in 2-D media. Stanford Exploration Project, Vol. 28, 21–30. Stanford University, Stanford.

Červený, V., 1981. Determination of second derivatives of travel-time field by dynamic ray tracing. Stanford Exploration Project, Vol. 28, 31–38. Stanford University, Stanford.

Červený, V., 1981. Ray tracing in a vicinity of a central ray. Stanford Exploration Project, Vol. 28, 39–48. Stanford University, Stanford.

Červený, V., 1981. Computation of geometrical spreading by dynamic ray tracing. Stanford Exploration Project, Vol. 28, 49–59. Stanford University, Stanford.

Červený, V., 1981. Dynamic ray tracing across curved interfaces. Stanford Exploration Project, Vol. 28, 61–73. Stanford University, Stanford.

Beránek, B., Červený,V., Novotný, O., and Pěč, K., 1981. Post-graduate courses in geophysics in Czechoslovakia. In: "Proc. of the Int. Conference on Post-Graduate Education of Physicists, Prague 1980", 54–55. The Int. Commission on Physics Education, Edinburgh.

Kosminskaya, I.P., Kapustyan, N.K., Červený, V., and Hron, F., 1982. Synthetic seismograms for the oceanic crust. In: Primeneniye chislennych metodov v issledovaniyi litosfery (Application of numerical methods in the investigation of lithosphere), Suzdal 1980", 119–131. Computing Center SO AN SSSR, Novosibirsk (in Russian).

Červený, V., Klimeš, L., and Pšenčík, I., 1982. Synthetic seismic wave fields for 2-D and 3-D inhomogeneous structures. In: "Proc. 27th Int. Geophys. Symp., Bratislava 1982", Sec. A(I), 17–28. Geofyzika n.p., Bratislava.

Červený, V., and Pšenčík, I., 1982. Propagation of waves in structurally complicated media. In: "Sbornik dokladov 2go nauchnogo seminara storon-chlenov SEV po neftyannoy geofizike, T. 1 - Seismorazvedka (Proc. of the 2nd seminar of the countries of SEV on Geophysical prospecting for oil)", 57–62. Sekretariat SEV, Moskva (in Russian).

Zahradník, J., Červený, V., and Barták, V., 1982. Seismic microzoning of Prague - A computational approach based on geological data. In: "Proc. XVII. General Assembly of the European Seismological Commission, Budapest 1980", 61–63. Akadémiai Kiadó, Budapest.

Janský, J., and Červený, V., 1982. Fast and stable computation of ray integrals and ray amplitudes in radially symmetric media. In: "Proc. XVII. General Assembly of the European Seismological Commission, Budapest 1980", 299–303. Akadémiai Kiadó, Budapest.

Červený, V., Popov, M.M., and Pšenčík, I., 1982. Computation of seismic wave fields in laterally inhomogeneous crustal structures. Gaussian beam approach. In: "Proc. XVII. General Assembly of the European Seismological Commission, Budapest 1980", 271–275. Akadémiai Kiadó, Budapest.

Červený, V., and Frangié, A.B., 1982. Seismic wave fields in media with causal absorption. In: "Proc. XVII. General Assembly of the European Seismological Commission, Budapest 1980", 277–281. Akadémiai Kiadó, Budapest.

Červený, V., Molotkov, I.A., and Pšenčík, I., 1982. Space-time ray method and its application in seismology. In: "Proc. XVII. General Assembly of the European Seismological Commission Budapest 1980", 283–287. Akadémiai Kiadó, Budapest.

Červený, V., and Pšenčík, I., 1982. Mathematical modelling of seismic wave fields in the Earth's crust by the Gaussian beam method. In: "Výzkum hlubinné geologické stavby Československa (Investigation of deep geological structure of Czechoslovakia), Loučná 1982". 31–43. Geofyzika N.E., Brno (in Czech).

Zahradník, J., and Červený, V., 1983. Computation of seismic response to local geological structures. In: "Proc. of the Meeting of the Working Group 4.3 KAPG, Bratislava 1979", 149–186. Geophysical Inst., Slovak Acad. Sci., Bratislava (in Russian).

Červený, V., 1983. Computation of synthetic seismograms for one-dimensional and two-dimensional media. In: "Chislennyye metody v seismicheskikh issledovaniyakh (Numerical methods in seismic investigations), Suzdal 1980", 41–53. Nauka, Sib. Division, Novosibirsk (in Russian).

Červený, V., 1983. Physics of earthquakes. Čs. čas. fyz.(A), 33, 433–445 (in Czech).

Červený, V., 1983. Synthetic seismology. Čs. čas. fyz.(A), 33, 511–518 (in Czech).

Červený, V., 1983. Matrix methods in seismic microzoning. Program MICRO. In: "Současné problémy seismiky (Recent problems of seismology), Loučná 1983", 65–82. Geofyzika, N.E., Brno (in Czech).

Klimeš, L., and Červený, V., 1983. Numerical modelling of seismic wave fields in three-dimensional media. In: "Současné problémy seismiky (Recent problems of seismology), Loučná 1983", 150–159. Geofyzika, N.E., Brno (in Czech).

Červený, V., and Pšenčík, I., 1983. Influence of strong lateral inhomogeneities on seismic wave fields. In: "Současné problémy seismiky (Recent problems of Seismology), Loučná 1983", 160–172. Geofyzika, N.E., Brno (in Czech).

Červený, V., 1984. Structural seismology. Čs. čas. fyz.(A), **34**, 236–257 (in Czech).

Červený, V., and Pšenčík, I., 1984. SEIS83 - Numerical modelling of seismic wave fields in 2-D laterally varying layered structures by the ray method. In: "Documentation of Earthquake Algorithms, Report SE-35 (E.R. Engdahl, ed.)", 36–40. World Data Center (A) for Solid Earth Geophysics, Boulder.

Červený, V., and Pšenčík, I., 1984. Data Set 1: Synthetic record sections for a 2-D laterally inhomogeneous structure and explanatory notes. In: "Workshop Proceedings: Interpretation of Seismic Wave Propagation in Laterally Heterogeneous Structures, Einsiedeln, August 1983", 3–14. Bureau of Mineral Resources, Geology and Geophysics, Canberra.

Červený, V., and Pšenčík, I., 1984. Data Set 1: Model Zurich. Computation of synthetic record sections. In: "Workshop Proceedings: Interpretation of Seismic Wave Propagation in Laterally Heterogeneous Structures, Einsiedeln, August 1983", 15–39. Bureau of Mineral Resources, Geology and Geophysics, Canberra.

Červený, V., and Pšenčík, I., 1984. A brief description of program package SEIS81, used to compute Data Set 1, Model Zurich. In: "Workshop Proceedings: Interpretation of Seismic Wave Propagation in Laterally Heterogeneous Structures, Einsiedeln, August 1983", 40–47. Bureau of Mineral Resources, Geology and Geophysics, Canberra.

Červený, V., and Pšenčík, I., 1984. Recent developments in the seismic investigation of the Earth's crust. In: "Výzkum hlubinné geologické stavby Československa (Investigation of Deep Geological Structure of Czechoslovakia), Liblice 1984", 103–109. Geofyzika, N.E., Brno (in Czech).

Červený, V., 1985. Seismic microzoning and numerical modelling of strong motion seismograms by the Gaussian beam method. In: "Předpověď účinků zemětřesení na vybraných lokalitách v Československu (Prediction of earthquake effects at selected localities of Czechoslovakia), Praha, January 1984", 321–335. Geofyzika, N.E., Brno (in Czech).

Červený, V., and Pšenčík, I., 1985. Program package SYNS2 for the computation of synthetic time sections. In: "Metody zpracování dat reflexní a refrakční seismiky (Methods of data processing in reflection and refraction seismics), Loučná, 1985", 11–22. Geofyzika N.E., Brno (in Czech).

Červený, V., and Janský, J., 1985. Fast computation of seismic wave fields in inhomogeneous media. In: "Metody zpracování dat reflexní a refrakční seismiky (Methods of data processing in reflection and refraction seismics), Loučná, 1985", 86–97. Geofyzika N.E., Brno (in Czech).

Červený, V., and Pšenčík, I., 1985. Synthetic seismograms and their application in the interpretation of seismic measurements. In: "Eight Czechosl. Conference of Geophysicists, Section S1-Seismics, Č. Budějovice, 1985", 125–130. Geofyzika N.E., Brno (in Czech).

Moczo, P., Červený, V., and Pšenčík, I., 1985. Application of ray method in seismic response analysis. In: "Proc. of the 3rd Symposium on Analysis of Seismicity and Seismic Risk, Liblice, June 1985", 455–463. Geophys. Inst., Czechosl. Acad. Sci., Praha.

Červený, V., 1986. Seismic waves in structurally complex media. In: "Eight Conference of Czechosl. Physicists, Bratislava 1985", 373–376. JSMF, Bratislava (in Czech).

Červený, V., and Pšenčík, I., 1987. Synthetic seismograms for crustal structures: Comparison of the ray method and the Gaussian beam method. In: "Recent Seismological Investigations in Europe (I.L. Nersesov, ed.)", 538–545. Nauka, Moscow.

Barták, V., Červený, V., Pšenčík, I., and Šílený, J., 1987. Synthetic seismograms for simple sources in laterally varying structures. In: "Recent Seismological Investigations in Europe (I.L. Nersesov, ed.)", 514–521. Nauka, Moscow.

Červený, V., and Pšenčík, I., 1987. Synthetic body wave seismograms for slightly dissipative crustal models. In: "Recent Seismological Investigations in Europe (I.L. Nersesov, ed.)", 530–537. Nauka, Moscow.

Červený, V., and Pšenčík, I., 1989. Influence of elastic anisotropy on seismic wave fields in the investigation of the structure of the lithosphere. In: "Výzkum hlubinné geologické stavby Československa (Investigation of Deep Geological Structure of Czechoslovakia), Smolenice 1988", 87-97. Geofyzika, N.E. Brno and Geophysical Inst. SAV, Bratislava, (in Czech).

Barták, V., Červený, V., and Pšenčík, I., 1990. Synthetic seismograms for finite-extent sources by a single ray approach. In: "Proc. of the 4th Int. Symp. on the Analysis of Seismicity and Seismic Risk, Bechyně 1989", 368–376. Geoph. Inst., Czechosl. Acad. Sci., Praha.

Červený, V., 1990. Perturbation methods for seismic body waves in factorized anisotropic inhomogeneous media. In: "Proc. of the 1st Congress of the Brazilian Geophysical Soc., Rio de Janeiro 1989", 78–83. Brazilian Geophys. Soc., Rio de Janeiro.

Pšenčík, I., Jech, J., Červený, V., Gajewski, D., Daley, T.M., McEvilly, T.V., and Majer, E.L., 1990. Anisotropic inversion of VSP travel time data, with an example from the Geysers. In: "Annual Report 1989, Lawrence-Berkeley Laboratory, Earth Sci. Division", 162–165. Lawrence-Berkeley Laboratory, Berkeley.

de Castro, M.A., and Červený, V., 1991. 3-D inversion of seismic reflection data using dynamic ray tracing. In: "Proc. of the 2nd Congress of the Brazilian Geophys. Soc., Salvador 1991", 811–816. Brazilian Geophys. Soc., Salvador.

Miranda, A.C.D., and Červený, V., 1991. Ray-Born synthetic seismograms for complex structures containing scatterers. In: "Proc. of the 2nd Congress of the Brazilian Geophys. Soc., Salvador 1991", 782–787. Brazilian Geophys. Soc., Salvador.

Andrade, F.C.M., and Červený, V., 1991. Influence of a near-surface structure on seismic wave fields and multiple suppression. In: "Proc. of the 2nd Congress of the Brazilian Geophys. Soc., Salvador 1991", 884–888. Brazilian Geophys. Soc., Salvador.

Pšenčík, I., Bulant, P., Červený, V., and Klimeš, L., 2001. Ray method in the modelling of seismic wave fields. Expanded Abstracts of 7th Int. Congress of SBGf (Salvador). Brazilian Geophysical Society, pp. 1154–1157.

Brokešová, J., and Červený, V., 2002. Viscoelastic R/T problem for arbitrary orientation of propagation and attenuation vectors. Extended Abstracts of 64th EAGE Conference (Florence)., P243 (4 pp.), Eur. Assoc. Geoscientists and Engr., Houten.

Červený, V., and Pšenčík, I., 2003. Slowness vectors of harmonic plane waves in viscoelastic anisotropic media. Expanded Abstracts of 8th Int. Congress of SBGf (Rio de Janeiro) (CD-ROM), Brazilian Geophysical Society (SBGf), Salvador, 6 pp.

Červený, V., Klimeš, L., and Pšenčík, I., 2004. Propagation of shear waves in inhomogeneous weakly anisotropic Earth's interior. Čs. čas. fyz. **54**, 179–181 (In Czech).

Červený, V., and Pšenčík, I., 2005. Polarization of plane waves in viscoelastic anisotropic media. Expanded Abstracts of 9th Int. Congress of SBGf (Salvador) (CD-ROM), Brazilian Geophysical Society (SBGf), Salvador.

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