PUBLICATIONS J. Robert Buchler

PAPERS

205. Buchler, J.R., Wood, P.R. & Soszyński, I. 2009, *More Ultralow Amplitude Variables in the LMC*, Astrophysical Journal, (submitted)

204. Marquette, J.-B, Beaulieu, J.-P., Buchler, J.R. et al. 2008, *The beat Cepheids in the Magellanic Clouds: an analysis from the EROS-2 database*, Astronomy and Astrophysics, Volume 495, pp.249-256

203. Szabo, R. & Buchler J. R., 2008, ¡I¿Mode Identification with Cepheid Phase Lag¡/I¿, in *Nonlinear Stellar Hydrodynamics and the Pulsations of Cepheids*, Eds. M.J. Goupil & N. Nardetto, European Astronomical Society Publications Series, submitted.

202. Buchler J. R. & Szabo, R., 2008, *Beat Cepheids as Galactic Metallicity Tracers* in *Nonlinear Stellar Hydrodynamics and the Pulsations of Cepheids*, Eds. M.J. Goupil & N. Nardetto, European Astronomical Society Publications Series, submitted.

201. Buchler J. R. 2008, *Beat Cepheids as Probes of Stellar and Galactic Metallicity: The New AGS Abundances*, Astrophysical Journal, Vol. 680, p. 1412.

200. Szabó, R., Buchler J. R. & Bartee, J., 2007, *The Cepheid Phase Lag Revisited*, Astrophysical Journal, Vol. 667, p. 1150 - 1160

199. Buchler, J.R. & R. Szabo, R. 2007, *Beat Cepheids as Probes of Stellar and Galactic Metallicity*, Astrophysical Journal, Vol. 660, pages 723 – 731 http://xxx.lanl.gov/abs/astro-ph/0611809
http://www.journals.uchicago.edu/ApJ/journal/issues/ApJ/v660n1/70899/70899.html

198. Beaulieu, J.-P., Buchler, J.R., Marquette, J.-B., Hartman, J. & Schwarzenberg-Czerny, A. 2006, *Detection of Beat Cepheids in M33 and Their Use as a Probe of the M33 Metallicity Distribution*, Astrophysical Journal Letters, Vol. 653, p. L101–L104.

197. Buchler, J.R., Wood, P.R., Keller, S. & Soszyński, I. 2005, *Ultra-low Amplitude Cepheids in the Large Magellanic Cloud*, Astrophysical Journal Letters, Vol. 631, p. L151 - L154
http://xxx.lanl.gov/abs/astro-ph/0506114
http://www.journals.uchicago.edu/ApJ/journal/issues/ApJL/v631n2/19687/19687.html

196. Kanbur, S., Ngeow, C. & Buchler, J.R. 2004, *Period-colour and Amplitude-Colour Relations in Classical Cepheid Variables II: the Galactic Cepheid Models*, Monthly Notices of the Royal Astronomical Society, Vol, 354, p. 212 – 224.
http://xxx.lanl.gov/abs/astro-ph/0404578

195. Szabó, R., Kolláth, Z. and Buchler, J.R. 2004, *Automated nonlinear stellar pulsation calculations: Applications to RR Lyrae stars. The slope of the fundamental blue edge and the first RRd model survey¡*, 2004, Astronomy and Astrophysics, Vol. 425, p. 627 – 639.
http://xxx.lanl.gov/abs/astro-ph/0406373

194. Buchler, J. R., Kolláth, Zoltán and Beaulieu, J-P., 2004, *Magellanic Cloud Cepheids, Pulsational and Evolutionary Modelling vs. Observations*, 2004, Astronomy and Astrophysics, , Vol. 423, p. 643 – 650
http://xxx.lanl.gov/abs/astro-ph/0404398

193. Buchler, J. R., Kolláth, Zoltan and Cadmus, R. 2004, *Evidence for Low-Dimensional Chaos in Semiregular Variable Stars*, Astrophysical Journal, Vol. 613, pp. 532 - 547.
http://xxx.lanl.gov/abs/astro-ph/0404578

192. Buchler, J. R. & Kolláth, Z., 2003, *Nonlinear Properties of the Semiregular Variable Stars*, in Mass-Losing Pulsating Stars and Their Circumstellar Matter, Eds. Y.Nakada, M.Honma & M.Seki, ASSL Ser. Vol. 283, 59 – 66
http://xxx.lanl.gov/abs/astro-ph/0303046

191. Buchler, J. R. & Kolláth, Z. 2002, *Mode Switching Time-Scales in the Classical Variable Stars*, Astrophysical Journal, Vol. 573, 324–329
http://xxx.lanl.gov/abs/astro-ph/0110488

190. Kolláth, Z., Buchler, J. R., Szabó, R.& Csubry, Z. 2002, *Nonlinear Beat Cepheid and RR Lyrae Models*, Astronomy & Astrophysics, Vol. 385, p. 932-939,
http://xxx.lanl.gov/abs/astro-ph/0110076

189. Csubry, Z., Szabó, R., Kolláth, Z. & Buchler, J.R., 2002, *Combined Modeling of Stellar Evolution and Pulsation*, Proceedings, IAU Colloquium 185, Astronomical Society of the Pacific Conference Series, Eds: C. Aerts, T. Bedding & J. Christensen-Dalsgaard, p. 406.

188. Szabó, R., Csubry, Z., Kolláth, Z. & Buchler, J.R., 2002 *Synthetic Nonlinear RR Lyrae Instability Strips*, Proceedings, IAU Colloquium 185, Astronomical Society of the Pacific Conference Series, Eds: C. Aerts, T. Bedding & J. Christensen-Dalsgaard, p. 404.

187. Szabó, R., Kolláth, Z., Csubry, Z. & Buchler, J. R., 2001, *Timescales and Transitions During Stellar Pulsation and Evolution*, in *Astrophysical Ages and Time Scales*, Eds. T. von Hippel, N. Manset & C. Simpson, ASP Conference Series, Volume 245, p. 373-375.

186. Buchler, J. R. & Kolláth, Z. 2001, *Du chaos dans la musique des étoiles*, (in french), Comptes Rendus du Colloque sur le "Chaos temporel et chaos spatio-temporel", 24–25 sep. 2001, Le Havre, France;
http://xxx.lanl.gov/abs/nlin.CD/0109028

185. Buchler, J. R., Kolláth, Z. & Cadmus, R. 2001, *Chaos in the Music of the Spheres*, Proceedings of CHAOS 2001, Potsdam, Germany, , AIP Conference Proceedings Volume 622, p. 61 - 73; http://xxx.lanl.gov/abs/astro-ph/0106329

184. Buchler, J. R. & Kolláth, Z., 2001, *Strange Cepheids and RR Lyrae*, Astrophysical Journal, Vol. 255, p. 961-966; http://xxx.lanl.gov/abs/astro-ph/0101392
http://www.journals.uchicago.edu/ApJ/journal/contents/ApJ/v555n2.html

183. Beaulieu, J.P. Buchler, J. R. & Kolláth, Z., 2001, *Cepheid Mass-Luminosity Relations from the Magellanic Clouds*, Astronomy & Astrophysics, Vol. 373, 164-172;
http://xxx.lanl.gov/abs/astro-ph/0010417
http://www.journals.uchicago.edu/ApJ/journal/contents/ApJ/v555n2.html

182. Buchler, J. R. & Kolláth, Z., 2001, *Nonlinear Analysis of Irregular Variables*, in *Stellar Pulsation: Nonlinear Studies*, Eds. M. Takeuti & D.D. Sasselov, Astrophysics and Space Science Library Series, Kluwer, Vol. 257, pp. 185–213
http://xxx.lanl.gov/abs/astro-ph/0003341

181. Kolláth, Z. & Buchler, J. R., 2001, *Double-Mode Stellar Pulsations*, in *Stellar Pulsation: Nonlinear Studies*, Eds. M. Takeuti & D.D. Sasselov, Astrophysics and Space Science Library

Series, Kluwer, Vol. 257, pp. 29–60
http://xxx.lanl.gov/abs/astro-ph/0003386

180. Feuchtinger, M., Buchler, J. R. & Kolláth, Z., 2000, *Hydrodynamical Survey of First Overtone Cepheids*, Astrophysical Journal, Vol. 544, p. 1056 – 1066;
http://xxx.lanl.gov/abs/astro-ph/0005230

179. Kolláth, Z., Buchler, J. R. & Feuchtinger, M., 2000, *RR Lyrae: Theory versus Observation*, Astrophysical Journal, Vol. 540, p. 468–473,
http://xxx.lanl.gov/abs/astro-ph/0001442

178. Szabó, R., Kolláth, Z., Csubry, Z., Buchler, J. R. 2000, *Nonlinear Survey of RRd Models*, in *The Impact of Large-Scale Surveys on Pulsating Star Research*, Eds. L. Szabados & D. W. Kurtz, Astronomical Society of the Pacific, Conference Series, Vol. 203, p. 374–375.

177. Buchler, J. R. 2000, *Nonlinear Pulsations of Convective Stellar Models*, in *The Impact of Large-Scale Surveys on Pulsating Star Research*, Eds. L. Szabados & D. W. Kurtz, Astronomical Society of the Pacific, Conference Series, Vol. 203, p. 343–355.

176. Colgate, S. A. & Buchler, J. R., 2000, *Coherent Transport of Angular Momentum – The Ranque Hilsch Tube as a Paradigm*, in *Astrophysical Turbulence and Convection*, Eds. J.R. Buchler & H. Kandrup, Annals of the New York Academy of Sciences, Vol. 898, p. 105–112.

175. Buchler, J. R. & Kolláth, Z., 2000, *Turbulent Convection in the Classical Variable Stars*, in *Astrophysical Turbulence and Convection*, Eds. J.R. Buchler & H. Kandrup, Annals of the New York Academy of Sciences, Vol. 898, p. 39–58.

174. Buchler, J. R., Yecko, P., Kolláth, Z., Goupil, M. J. 1999, *Turbulent Convection in Pulsating Stars*, in *Theory and Tests of Convection in Stellar Structure*, Astronomical Society of the Pacific Conference Series, Vol 173, 1999, A. Gimenez, E.F. Guinan and B. Montesinos, eds., p. 141–156.

173. Kolláth, Z., Beaulieu, J.P., Buchler, J. R. & Yecko, P., 1998, *Nonlinear Beat Cepheid Models*, Astrophysical Journal Letters 502, L55–L58

172. Yecko, P., Kolláth, Z. & Buchler, J. R. 1998, *Turbulent Convective Cepheid Models: Linear Properties*, Astronomy & Astrophysics 336, 553–564

171. Kolláth, Z., Yecko, P.E. & Buchler, J.R. 1997, *Turbulent Convective Cepheid Models*, in *Pulsating stars - Recent Developments in Theory and Observation*, Ed. M. Takeuti & D. Sasselov, Universal Academy Press, Tokyo, Japan, 225–228.

170. Kolláth, Z., Buchler, J.R. & Yecko, P.E. 1997, *Strange Modes in Classical Variable Stars*, in *Pulsating stars - Recent Developments in Theory and Observation*, Ed. M. Takeuti & D. D. Sasselov, Universal Academy Press, Tokyo, Japan, 195–198.

169. Buchler, J.R. 1999, *Stellar Arrhythmias* in *Proceedings of the 4th Experimental Chaos Conference*, Eds. M. Ding et al., World Scientific, p. 441–450.

168. Goupil, M.J., Buchler J. R. & Piciullo, R. 1998, *An Explanation of the Observed Dip at 8 – 10 Days in the Cepheid Histogram* in "A Half Century of Stellar Pulsation Interpretations: A Tribute to Arthur N. Cox, ed. P.A. Bradley and J.A. Guzik, Astronomical Society of the Pacific Conference Series, Vol. 135, 285–286.

167. Buchler, J.R., Kolláth, Z., & Serre, T. 1998, *Nonlinear Analysis of the Lightcurve of AC Her*, in "A Half Century of Stellar Pulsation Interpretations: A Tribute to Arthur N. Cox", ed. P.A.

Bradley and J.A. Guzik, Astronomical Society of the Pacific Conference Series, Vol. 135, 231–232.

166. Buchler, J.R. 1998, *Nonlinear Pulsations*, in "A Half Century of Stellar Pulsation Interpretations: A Tribute to Arthur N. Cox," ed. P.A. Bradley and J.A. Guzik, Astronomical Society of the Pacific Conference Series, Vol. 135, 220–230.

165. Buchler, J.R., Goupil, M. J. & Piciullo, R. 1997, *On the Deficiency of 10 Day Galactic Cepheids*, Astrophysical Journal Letters, Vol. 491, L99–L102.

164. Kolláth, Z., Buchler, J. R., Serre, T. & Mattei, J. 1998, *Analysis of the Irregular Pulsations of AC Herculis*, Astronomy & Astrophysics, Vol. 329, 147–155.

163. Buchler, J.R., Yecko, P.E. & Kolláth, Z., 1997, *The Nature of Strange Modes in Variable Stars*, Astronomy & Astrophysics, Vol. 326, 669–681.

162. Buchler, J.R., 1996, *Search for Low-Dimensional Chaos in Observational Data*, International School of Physics "Enrico Fermi", Course CXXXIII, *"Past and Present Variability of the Solar-Terrestrial System: Measurement, Data Analysis and Theoretical Models"*, Eds. G. Cini Castagnoli & A. Provenzale, 275–288, Società Italiana de Fisica, Bologna, Italy.

161. Kolláth, Z., Buchler, J.R., Beaulieu, J. P., & M.J. Goupil, 1996, *Modelling the Phase-Locked Pulsations of a P=14d EROS Star*, Proceedings of the Twelfth IAP Colloquium on *Variable Stars and the Astrophysical Returns of Microlensing Surveys*, Eds. R. Ferlet, J.P. Maillard & B. Raban, Editions Frontières, 427–430.

160. Beaulieu, J. P., Buchler, J.R., Goupil & Kolláth, Z., 1996, *A P=14d Star With Two Phase-Locked Modes of Pulsation in the EROS Data Base*, Proceedings of the Twelfth IAP Colloquium on *Variable Stars and the Astrophysical Returns of Microlensing Surveys*, Eds. R. Ferlet, J.P. Maillard & B. Raban, Editions Frontières, 399–402.

159. Buchler, J.R., 1996, *Classical Cepheids – A Review*, Proceedings of the Twelfth IAP Colloquium on *Variable Stars and the Astrophysical Returns of Microlensing Surveys*, Eds. R. Ferlet, J.P. Maillard & B. Raban, Editions Frontières, 181–192.

158. Buchler, J.R., Goupil, M.J. & Hansen C.J. 1997, *On the Role of Resonances in Nonradial Pulsators*, Astronomy & Astrophysics 321, 159–176

157. Kolláth, Z. & Buchler, J.R. 1996, *Time-Frequency Analysis of Variable Star Light Curves*, Eleventh Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences, 808, 116–124.

156. Letellier, C., Le Sceller, L., Gouesbet, G., Brown, R., Buchler, J.R. & Kolláth, Z. 1996, *Reconstructing A Dynamics From A Scalar Time Series*, Eleventh Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences, 808, 25–50.

155. Buchler, J.R., Kolláth, Z. & Marom, A. 1997 , *An Adaptive Hydrocode for Stellar Pulsations*, Astrophysics and Space Science, 253, 139–160.

154. Letellier, C., Gouesbet, G., Soufi, F., Buchler, J.R.& Kolláth, Z. 1996, *Chaos In Variable Stars : Topological Analysis of W Vir Model Pulsations*, *Chaos*, **6** (3), 466–476.

153. Buchler, J.R., Kolláth, Z., Beaulieu, J.P. & Goupil. M.J. 1996, *Do The Magellanic Cepheids Pose A New Puzzle?*, Astrophysical Journal Letters, 462, 83–86,

152. Buchler, J. R., Kolláth, Z., Serre, T. & Mattei, J. 1996, *A Nonlinear Analysis of the Variable Star R Scuti*, Astrophysical Journal, 462, 489–504.

151. Serre, T., Kolláth, Z. & Buchler, J. R., 1996, *Search For Low–Dimensional Nonlinear Behavior in Irregular Variable Stars – The Analysis of W Vir Model Pulsations*, Astronomy & Astrophysics, 311, 845–851.

150. Serre, T., Kolláth, Z. & Buchler, J. R., 1996, *Search For Low–Dimensional Nonlinear Behavior in Irregular Variable Stars – The Global Flow Reconstruction Method*, Astronomy & Astrophysics, 311, 833–844.

149. Buchler, J. R., Kolláth, Z. & Serre, S. 1995, *Chaos in Observational Data of Variable Stars –Irregularity from the Nonlinear Interaction of Standing Waves?* in *Waves in Astrophysics*, Eds. J.H. Hunter, R.E. Wilson, Annals of the New York Academy of Sciences, Vol. 773, 1–13.

148. Buchler, J. R., Serre, T., Kolláth, Z. & Mattei, J. 1995, *A Chaotic Pulsating Star – The Case of R Scuti*, Physical Review Letters 74, 842–845.

147. Buchler, J.R., Goupil, M.-J. & Serre. T. 1995, *Dynamic Pulsation Amplitudes for a Rotationally Split Nonradial Mode; the l=1 Case*, Astronomy & Astrophysics 296, 405–417.

146. Moskalik, P, & Buchler J.R. 1994, *Nonlinear Pulsational Behavior of BW Vulpeculae*, IAU Symp. No 162, on *Pulsation, Rotation and Mass Loss in Early-Type Stars*, Eds. L. A. Balona, H. F. Henrichs & J. M. LeContel (Kluwer: Dordrecht), 19–22.

145. Buchler, J.R., Goupil, M.-J. & Serre. Th. 1994, *Amplitude Variations in Rotationally Split Multiplets*, IAU Symp. No 162, on *Pulsation, Rotation and Mass Loss in Early-Type Stars*, Eds. L. A. Balona, H. F. Henrichs & J. M. LeContel (Kluwer: Dordrecht), 87–88.

144. Goupil, M.-J. & Buchler, J.R. 1994, *Amplitude Equations For Nonadiabatic Nonradial Pulsators*, Astronomy & Astrophysics 291, 481–499.

143. Buchler, J.R. & Moskalik, P. 1994, *Fourier Analysis of Short Period SMC Cepheids*, Astronomy & Astrophysics 292, 450–456.

142. Buchler, J.R. & Buchler, N. E. 1994, *BL Her Model Pulsations; III. Livermore Opacities*, Astronomy & Astrophysics 285, 213–219.

141. Kovács, G. & Buchler, J.R. 1994, *The Triple-Mode Variable AC Andromedae*, Astronomy & Astrophysics 281, 749–755

140. Buchler, J.R. 1993 *Stochastic Effects in Stellar Pulsations*, in *Stochastic Processes in Astrophysics*, Eds. J.R. Buchler & H. Kandrup, Annals of the New York Academy of Sciences 706, 54–69.

139. Buchler, J.R. 1993, *Prediction With Orthonormal Polynomials in Overlapping Windows*, Nuovo Cimento 108B, 1293–1297.

138. Buchler, J.R., Goupil, M.-J. & Kovács, G. 1993, *Stellar Pulsations With Stochastic Driving*, Astronomy & Astrophysics 280, 157–168.

137. Glasner, A. & Buchler, J.R. 1993, *The Spectrum of Linear Modes in Classical Variable Stars*, Astronomy & Astrophysics 277,69–76.

136. Buchler, J.R. & Moskalik, P. 1993, *A survey of BL Herculis-Type Models*, abstract, Proc. IAU Coll. 139 on New Perspectives On Stellar Pulsations and Pulsating Variable Stars, Ed. J.M. Nemec & J.M. Matthews (Cambridge: University Press), p. 277.

135. Moskalik, P. & Buchler, J.R. 1993, *The Bump Cepheid Mass Discrepancy Laid to Rest*, Proc.

IAU Coll. 139 on New Perspectives On Stellar Pulsations and Pulsating Variable Stars, Ed. J.M. Nemec & J.M. Matthews (Cambridge: University Press), 237–239.

134. Glasner, A. & Buchler, J.R. 1993, *The Higher Vibrational Modes in RR Lyrae*, Proc. IAU Coll. 139 on New Perspectives On Stellar Pulsations and Pulsating Variable Stars, Ed. J.M. Nemec & J.M. Matthews (Cambridge: University Press), 263–264.

133. Kovács, G. & Buchler, J.R. 1993, *Theoretical Implications of Triple–Mode RR Lyrae Pulsations*, Proc. IAU Coll. 139 on New Perspectives On Stellar Pulsations and Pulsating Variable Stars, Ed. J.M. Nemec & J.M. Matthews (Cambridge: University Press), 278–279.

132. Moskalik, P. & Buchler, J.R. 1993, *A Pulsational Study of BL Herculis Models, II. Light Curves*, Astrophysical Journal 406, 190–198.

131. Moskalik, P. & Buchler, J.R. 1993, *Period Doubling With Hysteresis in BL Her-type Models* , in *Nonlinear Phenomena in Stellar Variability*, p. 301, Eds. M. Takeuti & J.R. Buchler, Dordrecht: Kluwer Publishers, reprinted from 1993, Ap&SS, 210, 301–306.

130. Buchler, J.R. 1993, *A Dynamical Systems Approach to Nonlinear Stellar Pulsations*, in *Nonlinear Phenomena in Stellar Variability*, Eds. M. Takeuti & J.R. Buchler, Dordrecht: Kluwer Publishers, reprinted from 1993, Ap&SS, 210, 1–31.

129. Kovács, G. & Buchler, J.R. 1993, *Double-Mode Pulsations in RR Lyrae Models*, Astrophysical Journal 404, 765–772.

128. Buchler, J.R. & Moskalik, P. 1992, *A Pulsational Study of BL Herculis Models, I. Radial Velocities*, Astrophysical Journal 391, 736–749.

127. Kovács, G., Buchler, J.R., Marom, A., Iglesias, C.A. & Rogers, F. 1992, *Chemical Composition Effects and Double-Mode RR Lyrae Masses*, Astronomy & Astrophysics Letters 259, L46–L48.

126. Kovács, G., Buchler, J.R. & Marom, A. 1992, *RR Lyrae Pulsations Revisited*, Astronomy & Astrophysics Letters 252, L27–30.

125. Moskalik, P., Buchler, J.R. & Marom, M. 1992, *Toward a Reconciliation of the Bump and Beat Cepheid Masses*, Astrophysical Journal 385, 685–693.

124. Buchler, J.R., Moskalik, P., & Kovács, G. 1991, *Periodic Stellar Pulsations; Stability Analysis and Amplitude Equations*, Astrophysical Journal 380, 185–199.

123. Serre, T., Buchler, J.R. & Goupil, M.-J. 1991, *Predicting White Dwarf Light Curves*, Proceedings of the 7th European Workshop on White Dwarfs, Toulouse, France, NATO ASI Series, Ed. G. Vauclair, 175–183.

122. Buchler, J.R. & Moskalik, P. 1991, *Period Doubling and Chaos In Stellar Pulsations*, in *Confrontation Between Stellar Pulsation and Evolution*, Eds. C. Cacciari & G. Clementini, Astronomical Society of the Pacific Conference Series, San Francisco, 11, 383–387.

121. Kovács G. & Buchler J.R. 1991, *Effect of Rotation in Cepheids*, in *Confrontation Between Stellar Pulsation and Evolution*, Eds. C. Cacciari & G. Clementini, Astronomical Society of the Pacific Conference Series, San Francisco, 11, 226–229.

120. Moskalik P. & Buchler J.R. 1990, *Classical Cepheids With RV Tau Characteristics?*, Astrophysical Journal 366, 300–307.

119. Moskalik P., Buchler J.R. & Kovács, G. 1990, *Classical Cepheid Pulsations* in *Nonlinear*

Astrophysical Fluid Dynamics, Eds. J.R. Buchler & S. T. Gottesman, Annals of the New York Academy of Sciences 617, 37.

118. Buchler J.R. 1990, *Chaotic Pulsations in Stellar Models*, in *Nonlinear Astrophysical Fluid Dynamics*, Eds. J.R. Buchler & S.T. Gottesman, Annals of the New York Academy of Sciences 617, 17.

117. Regev O. & Buchler J.R. 1990, *Chaos in Stellar Variability and Interstellar Patterns*, in *The Ubiquity of Chaos*, Ed. S. Krasner (New York: American Association for the Advancement of Science), 218–222.

116. Buchler J.R. & Whalen P. 1990, *Experiments With Artificial Viscosity* in *The Numerical Modelling of Stellar Pulsations; Problems and Prospects*, Ed. J.R. Buchler, NATO ASI Ser. C (Dordrecht: Kluwer), 315–322.

115. Glasner S.A. & Buchler J.R. 1990, *Regular and Chaotic Pulsations of Convective W Virginis Envelopes*, in *The Numerical Modelling of Stellar Pulsations; Problems and Prospects*, Ed. J.R. Buchler, NATO ASI Ser. C302 (Dordrecht: Kluwer), 109–124.

114. Buchler J.R. & Moskalik P. 1990, *Resonances and Bifurcations* in *The Numerical Modelling of Stellar Pulsations; Problems and Prospects*, Ed. J.R. Buchler, NATO ASI Ser. C302 (Dordrecht: Kluwer), 143–154.

113. Buchler J.R. 1990, *The Modelling of Stellar Pulsations* in *The Numerical Modelling of Stellar Pulsations; Problems and Prospects*, Ed. J.R. Buchler NATO ASI Ser. C302 (Dordrecht: Kluwer), 1–26.

112. Moskalik P. & Buchler J.R. 1990, *Resonances and Period Doubling in the Pulsations of Stellar Models*, Astrophysical Journal 355, 590–601.

111. Buchler J.R., Kovács G. & Moskalik P. 1990, *A Survey of Bump Cepheid Model Pulsations*, Astrophysical Journal 351, 617–631.

110. Kovács G., Kisvarsanyi E. & Buchler J.R. 1990, *Cepheid Radial Velocity Curves Revisited*, Astrophysical Journal 351, 606–616.

109. Kovács G. & Buchler J.R. 1989, *The Cepheid Bump Progression and Amplitude Equations*, Astrophysical Journal, Vol. 346, 898–905.

108. Moskalik P. & Buchler J.R. 1989, *The Effects of 3:1 Resonances in Stellar Pulsations*, Astrophysical Journal 341, 997–1003.

107. Buchler J.R., Kovács G. & Goupil M.-J. 1988, *Chaotic Pulsations In Stellar Models*, Communications of Konkoly Observatory (Kultura: Budapest), Eds. G. Kovács, L. Szabados & B. Seidl, 265–276.

106. Buchler J.R. 1988, *The Amplitude Equation Formalism Applied To Stellar Pulsations*, Communications of Konkoly Observatory (Kultura: Budapest), Eds. G. Kovács, L. Szabados & B. Seidl, 71–85.

105. Kovács G. & Buchler J.R. 1988, *Regular and Irregular Pulsations in Population II Cepheids*, Astrophysical Journal 334, 971–994.

104. Goupil M.-J., Buchler J.R. & Kovács G. 1987, *A Possible Explanation of the Occurrence of Irregularities in Pulsating Stars*, Publications of the Astronomical Institute of the Czechoslovak Academy of Sciences, No.70, Edited by P. Harmanec, 149.

103. Buchler, J.R., Goupil M.J. & Kovács G. 1987, *Tangent Bifurcations and Intermittency in the Pulsations of Population II Cepheid Models*, Physics Letters A 126, 177–180.

102. Buchler, J.R. & Kovács, G. 1987, *Period-Doubling Bifurcations and Chaos in W Virginis Models*, Astrophysical Journal Letters 320, L57–L62.

101. Buchler, J.R. & Goupil, M.J. 1988, *A Mechanism for the Irregular Variability of the Supergiant Stars*, Astronomy & Astrophysics 190, 137–147.

100. Buchler, J.R. 1987, *Chaotic Behavior in Variable Stars*, in *Chaotic Phenomena in Astrophysics*, Eds. J.R. Buchler & H. Eichhorn, Annals New York Academy of Sciences, 37–54.

99. Kovács, G. & Buchler, J.R. 1988, *A Survey of RR Lyrae Models and Search for Double-Mode Behavior*, Astrophysical Journal 324, 1026–1041.

98. Buchler, J.R. & Kovács, G. 1987, *Modal Selection in Stellar Pulsators, II. Application to RR Lyrae Models*, Astrophysical Journal 318, 232–247.

97. Kovács, G., Buchler J.R. & Davis, C.G. 1987, *Application of Time-Dependent Fourier Analysis to Nonlinear Pulsational Stellar Models*, Astrophysical Journal 319, 247–259.

96. Davis, G.G., Kovács, G. & Buchler, J.R. 1987, *Time-Dependent Fourier Analysis, Application to Nonlinear Pulsations in Stellar Models*, *Stellar Pulsation*, Lecture Notes in Physics, Eds. A. N. Cox, W. M. Sparks & S. G. Starrfield, Springer Verlag, 199–203.

95. Kovács, G. & Buchler, J.R. 1988, *The Evolution to Steady Nonlinear Pulsation in Stellar Models*, Proceedings of the International Astronomical Union Symposium 123, *Advances in Helio and Asteroseismology*, Ed. J. Christensen-Dalsgaard, and S. Frandsen (Dordrecht, Reidel), 387–391.

94. Buchler, J.R. & Kovács, G. 1988, *Finally a Double-Mode RR Lyrae Model?*, Proceedings of the International Astronomical Union Symposium 123, *Advances in Helio and Asteroseismology*, Ed. J. Christensen-Dalsgaard and S. Frandsen, (Dordrecht, Reidel), 393–394.

93. Buchler, J.R. 1986, *Radiation Transfer in the Fluid Frame; An Addendum*, Journal of Quantitative Spectroscopy and Radiative Transfer 36, 441–443.

92. Buchler, J.R. & Kovács, G. 1986, *On the Modal Selection of Radial Stellar Pulsators*, Astrophysical Journal 308, 661–668.

91. Kovács, G., Shlosman, I. & Buchler, J.R. 1986, *Fourier Analysis of the Light Curves of the RR Lyrae Stars in the Globular Clusters M15, NGC 6171 and NGC 6723*, Astrophysical Journal 307, 593–608.

90. Olson, G., Auer, L.H. & Buchler, J.R. 1986, *A Rapidly Convergent Iterative Solution of the Non-LTE Line Transfer Problem*, Journal of Quantitative Spectroscopy and Radiative Transfer 35, 431–442.

89. Buchler, J.R. & Kovács, G. 1986, *The Effects of a 2:1 Resonance in Nonlinear Radial Stellar Pulsations*, Astrophysical Journal 303, 749–765.

88. Pesnell, W.D. & Buchler, J.R. 1986, *The Structure of Thermal Stellar Modes In Pulsating Stars*, Astrophysical Journal 303, 740–748.

87. Buchler, J.R. 1985, *A Perturbative Approach to Stellar Pulsations* in Chaos in Astrophysics, Eds. J.R. Buchler, J. Perdang, & E. Spiegel, NATO ASI Series C161, 137–163, Reidel Publ.

86. Klapp, J., Goupil, M.J. & Buchler, J.R. 1985, *Amplitude Equations for Nonadiabatic, Nonlinear Stellar Pulsators, II. Applications to Realistic Resonant Cepheid Models*, Astrophysical Journal 296, 514–528.

85. Buchler, J.R., Goupil, M.J. & Klapp, J. 1984, *A Perturbative Formalism for Nonlinear, Nonadiabatic Stellar Pulsations*, 25th Liège International Astrophysics Colloquium on *Theoretical Problems in Stellar Stability and Oscillations*, ed. A. Noels & M. Gabriel, 38–42.

84. Buchler, J.R., Goupil, M.J. & Klapp, J. 1984, *Nonadiabatic, Nonlinear Pulsations of Bump Cepheids*, in Cepheids: Observation and Theory, ed. B. F. Madore, IAU Colloq. 82, Cambridge University Press, 149–152.

83. Buchler, J.R. & Auer, L.H. 1985, *Iterative Solution to the Non-LTE Line Transport Problem*, in Radiative Properties of Hot Dense Matter, Eds. J. Davis et al., World Scientific Publishers, 58–68.

82. Buchler, J.R. & Goupil, M.J. 1984, *Amplitude Equations for Nonadiabatic, Nonlinear Stellar Pulsators, I. The Formalism*, Astrophysical Journal 279, 394–400.

81. Buchler, J.R. & Pesnell, W.D. 1984, *Critique of the Iterative Theory*, Astrophysical Journal 283, 316–320.

80. Barranco, M., Buchler, J.R. & Perdang, J. 1983, *Stability of Thermal Relaxation Oscillations*, Astronomy & Astrophysics 125, 6–12.

79. Buchler, J.R., & Regev, O. 1983, *The Effects of Nonlinearities on Radial and Nonradial Oscillation*, Astronomy & Astrophysics 123, 331–342.

78. Buchler, J.R. 1983, *Resonance Effects in Radial Pulsators*, Astronomy & Astrophysics 118, 163–165.

77. Buchler, J.R. & Regev, O. 1982, *The Effect of Non-adiabatic Layers on the Vibrational Behaviour of Stars*, Astronomy & Astrophysics 114, 188–191.

76. Buchler, J.R. & Regev, O. 1982, *Oscillations of an Extended Ionization Region in a Star*, Astrophysical Journal 263, 312–319.

75. Pesnell, W.D., Regev, O. & Buchler, J.R. 1982, *Applications of Two-Time Methods in Stellar Pulsations*, Proceedings, Conference on Pulsations in Classical and Cataclysmic Variables, Boulder, CO, 216–220.

74. Regev, O. & Buchler, J.R. 1981, *Multitime Asymptotic Methods for Slowly Evolving Oscillating Systems*, AIP Conference Proceedings of the Workshop on *Mathematical Methods in Hydrodynamics and Integrability in Related Dynamical Systems*, 327–331.

73. Marcos, S., Barranco, M. & Buchler, J.R. 1981, *Low Entropy Adiabats for Stellar Collapse*, Nuclear Physics 381, 507–518.

72. Buchler, J.R. 1983, *Radiation Transfer in the Fluid Frame*, Journal of Quantitative Spectroscopy and Radiative Transfer 80, 395–407.

71. Buchler, J.R. & Regev, O. 1982, *On the Work Integral in Stellar Pulsation Theory*, Astrophysical Journal 261, 301–309.

70. Regev, O., Buchler, J.R. & Barranco, M. 1981, *Multimode Stellar Pulsations III. Resonances*, Astrophysical Journal 257, 715–723.

69. Barranco, M., Buchler, J.R. & Regev, O. 1982, *Multimode Stellar Pulsations II. Anharmonic Oscillators*, Astrophysics and Space Science 84, 463–475.

68. Regev, O., & Buchler, J.R. 1981, *Multimode Stellar Pulsations—A New Approach*, Astrophysical Journal 250, 769–775.

67. Buchler, J.R. & Regev, O. 1981, *The Search For Double Mode Pulsator Models*, Astrophysical Journal 250, 776–781.

66. Barranco, M. & Buchler, J.R. 1981, *The Equation of State of Hot, Dense Stellar Matter—A Finite Temperature Nuclear Thomas-Fermi Approach*, Physical Review C 24, 1191–1202.

65. Barranco, M. & Buchler, J.R. 1981, *Clustering and Phase Transitions in Hot, Dense Stellar Matter*, Astrophysical Journal Letters 245, L10–L112.

64. Barranco, M., Buchler, J.R., & Livio, M. 1981, *Thermal Limit Cycle Oscillations on the Surface of Accreting Neutron Stars—X-Ray Bursters*, Astrophysical Journal 242, 1226–1231.

63. Buchler, J.R. & Barranco, M. 1981, *Phase Coexistence in Partially Degenerate Nuclear Matter*, International Journal of Quantum Chemistry Quantum Chemistry Symposium 15, 381–384.

62. Livio, M., Buchler, J.R., & Pesnell, W.D. 1981, *Stability Analysis of Slow Spherical Motion of a Gravitating Fluid*, Astrophysical Journal 243, 617–624.

61. Buchler, J.R., Livio, M. & Colgate, S.A. 1980, *Supernova Explosions—The Role of a Rayleigh-Taylor Instability*, IAU Colloquium 59, Space Science Reviews 27, 571–577.

60. Buchler, J.R., Barranco, M. & Livio, M. 1980, *X-Ray Burst Sources—A Simple Two Zone Model*, IAU Colloquium 59, Space Science Reviews 27, 585–590.

59. Barranco, M. & Buchler, J.R. 1980, *Thermodynamic Properties of Hot, Asymmetric Nuclear Matter*, Physical Rev. C22, 1729–1737.

58. Livio, M., Buchler, J.R. & Colgate, S.A. 1980, *Rayleigh-Taylor Driven Supernova Explosions—A Two-Dimen sional Numerical Study*, Astrophysical Journal Letters 238, L139–L143.

57. Bruenn, S.W., Buchler, J.R. & Livio, M. 1980, *Rayleigh-Taylor Convective Overturn in Stellar Collapse*, Astrophysical Journal Letters 234, L183–L186.

56. Buchler, J.R. 1980, *The Transport Equations for Fast Electrons in a Moving Newtonian Fluid*, Physics of Fluids 23, 2189–2192.

55. Gudmundsson, E. & Buchler, J.R 1980, *On the Consequence of Neutrino Trapping in Gravitational Collapse*, Astrophysical Journal 238, 717–721.

54. Livio, M. & Buchler, J.R. 1980, *Rayleigh-Taylor Convective Overturn as a Possible Solution of the Supernova Puzzle*, contributed paper, International Colloquium on the Physics of Dense Matter, Paris, 17–22 Sept. 1979, J. de Physique, 41, Suppl. No. 3., Colloque C2, 155–C2, 157.

53. Buchler, J.R., Colgate, S.A. & Mazurek, T.J. 1980, *The Afterclap of Degenerate Carbon Ignition Revisited*, J. de Physique 41, Suppl. No. 3, Colloque C2, 15–C2, 163.

52. Buchler, J.R. & Barranco, M. 1980, *The Equation of State at Subnuclear Densities*, Invited paper, International Colloquium on the Physics of Dense Matter, Paris, 17–22 Sept. 1979, J. de Physique 41, Suppl. No. 3, Colloque C2, 3–C2, 38.

51. Buchler, J.R. & Epstein, R.I. 1980, *A Thomas-Fermi Model of Warm Nuclei*, Astrophysical Journal Letters 235, L91–L93.

50. Buchler, J.R. 1979, *Radiation Hydrodynamics in the Fluid Frame*, Journal of Quantitative Spectroscopy and Radiative Transfer 22, 293–300 (also LASL report LA–UR–78–2542).

49. Buchler, J.R. & Perdang, J. 1979, *De Vibrantibus Systematibus Lente Autonomiterque Evolventibus*, International Journal of Quantum Chemistry, Symposium No. 13, 183–187.

48. Buchler, J.R. & Perdang, J. 1979, *Thermal Relaxation Oscillations in a Two–Zone Model*, Astrophysical Journal 231, 524–533.

47. Littleton, J.R., Buchler, J.R., & Truran, J.W. 1979, *Structure of Detonation Waves in Degenerate Carbon Cores—Two Component Plasma Models*, Astrophysical Journal 230, 223–229.

46. Bruenn, S.A., Buchler, J.R. & Yueh, W.R. 1978, *Neutrino Transport in Supernova Models: A Multigroup, Flux-Limited Diffusion Scheme*, Astrophysics and Space Science 59, 261–284.

45. Buchler, J.R. & Datta, B. 1979, *Neutron Gas: Temperature Dependence of the Effective Interaction*, Physical Review C19, 494–497.

44. Perdang, J. & Buchler, J.R. 1978, *Thermal Flickers; a Semi-Analytical Approach*, Conference on Current Problems in Stellar Pulsation Instabilities, Goddard Space Flight Center, Maryland, 121–128.

43. Buchler, J.R. & Bruenn, S.W. 1978, *Neutrino Radiation and Transport in Stellar Collapse*, International Conference on Neutrino Physics and Neutrino Astrophysics , Purdue University, Editor, E.C. Fowler, 131–136.

42. Bruenn, S.W., Buchler, J.R., & Yueh, W.R. 1978, *Shock Structure and Neutrino Radiation in Stellar Collapse*, Astrophysical Journal Letters 221, L8–L86.

41. Buchler, J.R. 1978, *The Two-Time Method Applied to Slowly Evolving Oscillating Systems*, Nonlinear Equations in Physics and Mathematics, 85–95, Edit. A.O. Barut, Reidel Publ.

40. Buchler, J.R. 1978, *On the Vibrational Stability of Stars in Thermal Imbalance*, Astrophysical Journal 220, 629–635.

39. Yueh, W.R. & Buchler, J.R. 1977, *Neutrino Transport in Supernova Models; Sn Method*, Astrophysical Journal 217, 565–577.

38. Buchler, J.R. & Coon, S. 1977, *The Interacting Neutron Gas at High Density and Temperature*, Astrophysical Journal 212, 807–815.

37. Buchler, J.R., Yueh, W.R., & Perdang, J. 1977, *Two-Time Method Applied to a One-Zone Atmosphere*, Astrophysical Journal 214, 510–521.

36. Yueh, W.R., & Buchler, J.R. 1977, *The Effects of Fermi Statistics on Neutrino Transport in Supernova Models*, Astrophysical Journal Letters 211, L12–L124.

35. Buchler, J.R., Fowler, W.A., Newman, M.J., & Howard, M. 1976, *Production of Heavy Elements in Neutron Stars*, Nature 263, 354.

34. Buchler, J.R. & Yueh, W.R. 1976, *Compton Scattering Opacities in a Partially Degenerate Electron Plasma at High Temperature*, Astrophysical Journal 210, 440–446.

33. Buchler, J.R. & Yueh, W.R. 1976, *Compton Scattering in a Degenerate Electron Gas*, International Journal of Quantum Chemistry Symposium No. 10, 277–282.

32. Yueh, W.R. & Buchler, J.R. 1976, *Neutrino Processes in Dense Matter*, Astrophysics & Space Science 41, 221–251.

31. Yueh, W.R. & Buchler, J.R. 1976, *Scattering Functions for Neutrino Transport*, Astrophysics & Space Science 39, 429–435.

30. Buchler, J.R. & Yueh, W.R. 1975, *Compton Scattering Opacity*, Physics Letters 58B, 463–466.

29. Buchler, J.R. & Coon, S. 1975, *The Hot Interacting Neutron Gas*, in Quantum Statistics and the Many-Body Problem, Edit. S.B. Trickey et al., Plenum Press, N.Y., 231–237.

28. Buchler, J.R. & Mazurek, T.J. 1975, *On Presupernova Dynamical Mass Ejection by Non-Detonated Stellar Cores*, Mémoires de la Société Royale des Sciences de Liège, 6e ser., tome VIII, 443–445.

27. Buchler, J.R., Mazurek, T.J., & Truran, J.W. 1975, *The Afterclap of Degenerate Carbon Ignition*, Comments on Astrophysics and Space Science 6, 45–55.

26. Littleton, J.E. & Buchler, J.R. 1974, *Electron-Ion Relaxation in a Dense Plasma*, Astrophysical Journal 191, 731–737.

25. Barkat, Z.K., Wheeler, J.C., Buchler, J.R., & Rakavy, G. 1974, *Envelope Dynamics of Iron Core Supernova Models*, Astrophysics and Space Science 29, 267–283.

24. Buchler, J.R. 1973, *Carbon Detonation Supernova*, Proceedings of the International Conference on Supernovae, Lecce, Italy, 329–332.

23. Buchler, J.R., Wheeler, J.C., & Barkat, Z. 1974, *Off-centre Detonations in Evolved Stellar Cores*, Astrophysics and Space Science 26, 391–401.

22. Wheeler, J.C., Buchler, J.R., & Barkat, Z. 1973, *Neutron Star Formation in a Carbon Detonation Supernova*, Astrophysical Journal 184, 897–906.

21. Buchler, J.R. 1973, *Off-centre Detonation Supernovae*, Invited paper, Proceedings of the Conference on Explosive Nucleosynthesis, Austin, Texas, University of Texas Press, 229–233.

20. Brueckner, K.A. & Buchler, J.R. 1972, *Few Nucleon Systems: Applications*, Invited paper, Proceedings of the 8th Session of the International Conference on Few Particle Problems in the Nuclear Interaction, University of California, Los Angeles, 913–927.

19. Buchler, J.R. 1972, *Energy-Density Formalism with Application to Neutron Star Matter and r-Process Nucleosynthesis*, Proceedings of the International Conference on *Present Status and Novel Developments in the Nuclear Many Body Problem*, Rome, 731–744.

18. Buchler, J.R. 1972, *Properties and Synthesis of Heavy Nuclei and Properties of Neutron Star Matter*, Invited paper, Proceedings of the 53rd International Astronomical Union Symposium on Dense Matter, Boulder, Colorado, 67–75.

17. Barkat, Z., Buchler, J.R., & Ingber, L. 1972, *Equation of State of Neutron Star Matter at Subnuclear Densities*, Astrophysical Journal 176, 723–738.

16. Barkat, Z., Buchler, J.R., & Wheeler, J.C. 1972, *Selected Properties of Matter at High Density and Temperature. Equation of State and Rates of Beta Processes and Associate Neutrino Losses in Matter at High Density and Temperature*, Astrophysical Journal 173, 183–194.

15. Buchler, J.R., Wheeler, J.C., & Barkat, Z. 1972, *Detonation in Stellar Cores; Effects of Nuclear Statistical Equilibrium*, Astrophysical Journal 172, 713–716.

14. Barkat, Z., Buchler, J.R., & Wheeler, J.C. 1972, *Evolution of Growing Stellar Cores up to Carbon Ignition; Whence the Pulsars*, Astrophysical Journal 171, 651–662.

13. Buchler, J.R., Barkat, Z., & Wheeler, J.C. 1971, *Thermonuclear Detonations in Evolved Stellar Cores*, Astrophysical Journal 167, 465–478.

12. Buchler, J.R. & Ingber, L. 1971, *Properties of the Neutron Gas and Application to Neutron Stars*, Nuclear Physics A170, 1–11.

11. Buchler, J.R. & Barkat, Z. 1971, *Properties of Low Density Neutron Star Matter*, Physical Review Letters 27, 48–51.

10. Barkat, Z., Buchler, J.R., & Wheeler, J.C. 1971, *Beta Processes in Exploding Stars*, Astrophysical Letters 8, 21–25.

9. Buchler, J.R. & Barkat, Z. 1971, *Clustering of Nucleons in Low Density Neutron Star Matter*, Astrophysical Letters 7, 167–170.

8. Barkat, Z., Buchler, J.R., & Wheeler, J.C. 1970, *The Damping Effects of Beta Processes on Exploding Stars*, Astrophysical Letters 6, 117–121.

7. Wheeler, J.C., Barkat, Z., & Buchler, J.R. 1970, *On the Possibility of Neutron Star Formation in a Carbon Detonation Supernova*, Astrophysical Journal Letters 162, L129-L132.

6. Sim, H.K., Woo, C.W., & Buchler, J.R. 1970, *Diagrammatic Analysis of the Method of Correlated Basis Functions—Jastrow Correlating Factor for a Weakly Interacting Bose Gas*, Physical Review A2, 2024–2032.

5. Sim, H.K., Woo, C.W., & Buchler, J.R. 1970, *Diagrammatic Analysis of the Method of Correlated Basis Functions*, Physical Review Letters 24, 1094–1098.

4. Brueckner, K.A., Buchler, J.R. & Kelly, M.M. 1968, *New Theoretical Approach to Nuclear Heavy Ion Scattering*, Physical Review, 173, 944–949.

3. Brueckner, K.A., Buchler, J.R., Clark, R. & Lombard, R.J. 1969, *Statistical Theory of Nuclei, II. Medium and Heavy Nuclei*, Physical Review 181, 1543–1551.

2. Brueckner, K.A., Buchler, J.R., Jorna, S., & Lombard, R.J. 1968, *Statistical Theory of Nuclei, I*, Physical Review 171, 118–1195.

1. Buchler, J.R. 1969, *Applications of Statistical Methods to Nuclear Structure*, Ph.D. Thesis, University of California, San Diego.

EDITED BOOKS

15. Gottesman, S. T., Buchler, J. R. & Mahon, M. E. 2005, *Nonlinear Dynamics in Astronomy and Physics: In Memory of Henry Kandrup*, Annals of the New York Academy of Sciences, Vol. 1045.

14. Fry, J. N., Buchler, J. R. & Kandrup, H., 2001, *The Onset of Nonlinearity in Cosmology*, Proceedings of the Fifteenth Annual Florida Workshop in Nonlinear Astronomy and Physics, Annals New York Academy of Sciences, Vol. 927.

13. Buchler, J.R. & Kandrup, H. 2000, *Astrophysical Turbulence and Convection*, Proceedings of the Fourteenth Annual Florida Workshop in Nonlinear Astronomy and Physics, Annals of the New York Academy of Sciences, Vol. 898.

12. Buchler, J.R., Gottesman, S., Hunter, J. & Kandrup, H. 1998, *Nonlinear Dynamics and Chaos in Astrophysics*, Proceedings of the Thirteenth Annual Florida Workshop in Nonlinear Astronomy and Physics, Annals of the New York Academy of Sciences, Vol. 867.

11. Buchler, J.R. Dufty, J. & Kandrup. H. 1997, *Long-range Correlations in Astrophysical and Other Systems*, Proceedings of the Twelfth Florida Workshop in Nonlinear Astronomy and Physics, Annals of the New York Academy of Sciences, Vol. 848.

10. Buchler, J.R. & Kandrup. H. 1996, *Nonlinear Signal and Image Analysis*, Proceedings of the Eleventh Florida Workshop in Nonlinear Astronomy and Physics, Annals of the New York Academy of Sciences 808.

9. Takeuti, M. & Buchler, J.R. 1993, *Nonlinear Phenomena in Stellar Variability*, Dordrecht: Kluwer Academic Publishers.

8. Buchler, J.R. & Kandrup, H. 1993, *Stochastic Processes in Astrophysics*, Proceedings of the Eighth Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences 706.

7. Buchler, J.R., Detweiler, S.L., & Ipser J.R. 1991, *Nonlinear Problems in Relativity and Cosmology*, Proceedings of the Sixth Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences 631.

6. Buchler, J.R. & Gottesman, S.A. 1990, *Nonlinear Astrophysical Fluid Dynamics*, Proceedings of the Fifth Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences 617.

5. Buchler, J.R. 1990, *The Numerical Modelling of Stellar Pulsations; Problems and Prospects* NATO ASI Series C302 (Dordrecht: Kluwer).

4. Buchler, J.R., Gottesman, S., & Hunter J. 1990, *Galactic Models*, Proceedings of the Fourth Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences 596.

3. Buchler, J.R., Ipser, J., & Williams, C. 1988, *Integrability in Dynamical Systems*, Proceedings of the Third Florida Workshop in Nonlinear Astronomy, Annals of the New York Academy of Sciences 536.

2. Buchler , J.R. & Eichhorn, H. 1987, *Chaotic Phenomena in Astrophysics*, Proceedings of the Second Florida Workshop in Nonlinear Astronomy, Annals New York Academy of Sciences 497.

1. Buchler, J.R., Perdang, J.M., & Spiegel, E.A. 1985, *Chaos in Astrophysics*, NATO ASI Series

C 161 (Dordrecht: Reidel).